DOCUMENT RESUME

ED 377 092 SO 024 048

AUTHOR	Harris, Robert, Ed.; Kourilsky, Marilyn, Ed.
TITLE	Handbook for Survival: A Practical Guide for Today's High School Economics Educators.
INSTITUTION	California Council for Economic Education.; California State Dept. of Education, Sacramento.
REPORT NO	ISBN-0-8011-0976-0
PUB DATE	91
NOTE	121p.
AVAILABLE FROM	Bureau of Publications, Sales Unit, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271 ($7 plus tax).
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Economics; *Economics Education; Educational Resources; Evaluation Methods; High Schools; Instructional Improvement; *Instructional Innovation; Instructional Materials; Learning Activities; Learning Modules; Secondary School Curriculum; Social Studies; State Curriculum Guides
IDENTIFIERS	*California

ABSTRACT

This handbook provides valuable information for educators to use in developing a one-semester high school course on economics. The volume includes activity outlines, a model for assessment, and a list of resources to enhance instruction in economics. The handbook identifies methods to enrich instruction using the state-mandated economic component of the California high school curriculum. Chapter 1 reviews the basic components of microeconomics, macroeconomics, economic systems, and international trade as part of the course content. Chapter 2 describes issues-oriented activities to enliven economic concepts. Ten modules provide opportunities to encourage students to study economics through the application of basic concepts. Chapter 3 identifies the conceptual, semantic, and attitudinal hurdles that can interfere with a student's learning of economics. Chapter 4 illustrates a model for the assessment of student learning in a high school economics course. An appendix identifies 53 resources and addresses for further information to enhance high school economics instruction. (CK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

SO

Economic Education Mandate:

ED 377 092

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

HANDBOOK FOR SURVIVAL

A Practical Guide for Today's High School Economics Educators

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY

T. Smith

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SO 024 048

Edited by
Robert Harris
and
Marilyn Kourilsky

Published by the
California Department of Education
in cooperation with the
California Council on Economic Education

BEST COPY AVAILABLE

Publishing Information

The *Economic Education Mandate: Handbook for Survival* was prepared by Marilyn Kourilsky, Robert Harris, James Bruno, Bill Kerby, Jim Charkins, and Ed Van Brenk, working under the direction of the Economic Education Advisory Committee, which is identified in the Acknowledgments on page vi. Drs. Kourilsky and Harris served as the editors of the manuscript. The handbook was published by the California Department of Education in cooperation with the California Council on Economic Education. It was distributed under the provisions of the Library Distribution Act and *Government Code* Section 11096.

As required by California law (*Education Code* Section 33308.5), the California Department of Education reminds its readers that the guidance in this document is not binding on local educational agencies or other entities, except for any statutes, regulations, and court decisions that are referenced herein; and, thus, compliance with the document is not mandatory.

Copyright © 1991, California Department of Education

Any questions regarding the reproduction of this document should be addressed to the Copyright Program Officer, California Department of Education, P.O. Box 944272, Sacramento, CA 94244-2720. However, the readers are advised that the "fair use" provisions of the U.S. Copyright Law permit the reproduction of material from the handbook for "purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research."

Copies of this publication are available for $7 each, plus sales tax for California residents, from the Bureau of Publications, Sales Unit, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271. A complete list of publications available from the Department may be obtained by writing to the Bureau of Publications or by calling the Sales Unit at (916) 445-1260.

ISBN 0-8011-0976-0

Contents

Page

Handouts and Overhead Masters iv
Foreword v
Acknowledgments vi
Introduction vii

Chapter 1: What Content Should a High School Course in Economics Include?

Unit I: The Function of Economic Systems: *Deciding on What, How, and for Whom to Produce* 1-1
Unit II: A Closer Look at the Free Market System 1-3
Unit III: Firm Behavior and Different Types of Market Structures 1-6
Unit IV: Money and the Banking System 1-9
Unit V: National Income and the Principles of International Trade 1-11

Chapter 2: Ten Suggested Modules for Teaching Economics

- Module 1: Marginalism: The Economic Way of Thinking .... #1-1
- Module 2: Water Rights in California: A Problem of Scarcity .... #2-1
- Module 3: Immigration and the U.S. Economy .... #3-1
- Module 4: Proposition 103: Applying Supply and Demand .... #4-1
- Module 5: Relative vs. Absolute Prices .... #5-1
- Module 6: The Economics of Environmental Protection .... #6-1
- Module 7: Monopolies and Antitrust Legislation .... #7-1
- Module 8: Money and Inflation .... #8-1
- Module 9: Proposition 13: Taxes and Economics .... #9-1
- Module 10: International Trade: The U.S. in a Global Economy .... #10-1

Chapter 3: Learning Hurdles in Economics

Unit I: The Function of Economic Systems: *Deciding on What, How, and for Whom to Produce* 3-2
Unit II: A Closer Look at the Free Market System 3-3
Unit III: Firm Behavior and Different Types of Market Structures 3-6
Unit IV: Money and the Banking System 3-7
Unit V: National Income and the Principles of International Trade 3-8

Chapter 4: Replacing a Thermometer with a Thermostat: A Model for Assessment of Classroom Learning in Economics

Appendix: Resources and Materials in Economic Education

4

Handouts and Overhead Masters

Handouts—Chapter 2

Module 1 *Page*
1. An Exercise in Marginalism .... #1-4
2. What's Wrong with This Way of Thinking? .... #1-5

Module 2
1. Water in the Wild, Wild West .... #2-3
2. What's Wrong with This Way of Thinking? .... #2-6
3. Graphing a Demand Curve .... #2-7

Module 3
1. A Case Study in Immigration: Basque Sheepherders in the American West .... #3-2
2. What's Wrong with This Way of Thinking? .... #3-3

Module 4
1. Understanding Demand .... #4-5
2. Understanding Supply .... #4-6
3. What's Wrong with This Way of Thinking? .... #4-7

Module 5
1. Deriving Your Demand for Gasoline .... #5-4
2. Think About It—Write About It .... #5-5

Module 6
1. What's Wrong with This Way of Thinking? .... #6-3

Module 8
1. Some Folklore About Money .... #8-3
2. Money, History, and The Wizard of Oz .... #8-6
3. What's Wrong with This Way of Thinking? .... #8-7

Module 9
1. Classroom Mollie Notes .... #9-3
2. Government Expenditures .... #9-4
3. Evaluating Tax Policies .... #9-6

Module 10
1. Applying Comparative Advantage .... #10-5
2. Applying Comparative Advantage .... #10-7

Overhead Masters—Chapter 2

An Exercise in Marginalism .... #1-3
Shifting Curves .... #4-3
The Supply Curve .... #4-4
Graphing a Demand for Gasoline .... #5-3
Applying Comparative Advantage .... #10-4

Foreword

Our nation's economy has become part of a vast, complex international economy, and our high school students must understand economics if they are to participate successfully in this worldwide marketplace. Specifically, our students need to acquire skills in economics that will serve them for a lifetime. Those students who master the decision-making processes that are part of economics will be better prepared to be effective citizens, wise consumers, and capable employees.

Recognizing the importance of the study of economics, the California Legislature enacted legislation in 1985 that now requires all of our high school seniors to complete one semester of economics prior to graduation. To help teachers provide effective instruction in this important subject, the California Council on Economic Education and the California Department of Education worked together to produce this handbook. It includes valuable information for teachers and others to use in developing the one-semester course in economics that must now be included in our high school curricula (*Education Code* Section 51225.3). The handbook, which was prepared by a distinguished group of economics educators, identifies pitfalls to avoid, outlines activities that can be used in the course, provides a model for assessment, and includes a list of resources available to enhance instruction in economics.

I believe this handbook can be an effective resource for teaching economics in a way that is consistent with California's landmark *History–Social Science Framework.* It has the potential for enriching instruction in economics throughout the state and for helping to ensure that our students are able to meet the challenges of the twenty-first century. I am very grateful to all of those who developed the material for this new handbook on economic education and to those who supported the effort, especially the Economic Education Advisory Committee.

Bill Honig

State Superintendent of Public Instruction

Acknowledgments

The authors thank several groups and individuals for their contributions to the success of this project.

First, this handbook would not have been possible without the financial commitment of the California Business Roundtable; the Atlantic Richfield Company, through Anthony Finizza, Chief Economist; the Pacific Telesis Foundation; and the California Department of Education.

Second, we thank the economic education groups that have provided leadership and direction through their designated representatives to the Economic Education Advisory Committee for the California Economic Education Project at the California Department of Education. The members of the Advisory Committee were:

Dale Baxter
President, Junior Achievement of the Bay Area
President, Economic Education Advisory Committee

Ronald A. Banaszak, *Vice-President*
Educational Programs
Foundation for Teaching Economics

Joan Bowen, *President*
Industry-Education Council of California

Ronald Eadie, *President*
Wells Fargo Foundation

Marilyn Kourilsky, *Professor and Dean of Teacher Education*
University of California, Los Angeles

Mary Leslie, *Executive Director*
Pacific Telesis Foundation

Third, we acknowledge the enormous contribution of the teachers and economic educators who provided invaluable insights, reviewed the materials, and tested the activities in the classroom:

Ronald A. Banaszak, *Foundation for Teaching Economics*
Jana Eison, *University of California, Los Angeles*
Jill Houska, *University of California, Los Angeles*
William C. Kerby, *California State University, Sacramento*
Donald Leet, *California State University, Fresno*
Jane Lopus, *California State University, Hayward*
Ronald Moore, *El Camino High School, Sacramento*
Smokey Murphy, *Mira Loma High School, Sacramento*

Fourth, we thank Eileen Hogan, California State University, Sacramento, Economic Education Advisory Committee, and Lynn Bartlett, California Department of Education, who worked tirelessly in a final review of the handbook prior to publication.

Finally, we thank Carla Morita of the Reprographic Services at California State University, Sacramento, who stayed with us through numerous setbacks to find contractors who could meet our specifications within a limited budget.

Introduction

Economics is a way of thinking, almost like learning a new language. Properly used, economics provides a logical framework for analysis, rather than providing pat answers. Perhaps that is why disagreements among economists seem to be the norm, or perhaps Economics Professor Lester Thurow of the Massachusetts Institute of Technology was right when he said that when economists give different answers to questions, it is because the questions are wrong. It is true that we tend to agree about most of the analytical framework, but we still reach different conclusions because of different values.

The California Economic Education Project developed from the belief that economics can be exciting, interesting, and relevant. The focus is on economics in the foregoing sense, as a framework for decision making. The basic message is that every choice means giving up something; in short, there is no such thing as a free lunch.

This handbook identifies the survival skills for a world in which economics is a state-mandated component of the high school curriculum. Toward this end, it includes a description of the content to be included in a high school economics course, supplementary course materials to include in a "survival kit," issues-oriented activities to bring alive the economic concepts, learning hurdles that must be overcome to make the course a success, and a model for assessing student learning.

In Chapter 1 Marilyn Kourilsky reviews the basic concepts of microeconomics, macroeconomics, economic systems, and international trade.

In Chapter 2 Robert Harris, Bill Kerby, Jim Charkins, and Ed Van Brenk describe issues-oriented activities to bring economic concepts alive. The ten modules in this chapter provide a series of "surgical strikes" to make students want to study economics. The modules can be used independently or as part of a package to supplement any standard economics textbook. This "mix or match" feature increases the modules' flexibility as instructional tools. The activities apply the basic concepts of economics outlined in the state's *Model Curriculum Standards* for economics and also described in the 1988 *History–Social Science Framework*. Because the emphasis is on the economic way of thinking, which is essentially decision making, the activities deal more with microeconomics than with macroeconomics.

In Chapter 3 Dr. Kourilsky describes the learning hurdles that can interfere with a student's learning of economic concepts. Such hurdles can be conceptual, semantic, or attitudinal. Without an understanding of their differences and similarities, one cannot design appropriate strategies for dealing with learning hurdles.

In Chapter 4 Dr. Kourilsky and James Bruno provide a model for assessment of student learning in the high school economics course.

Overall, the handbook identifies the skills a person needs for surviving an economics mandate. Specifically, the book can:

- Provide a crash review course for the teacher who is uncomfortable with a new teaching assignment in economics.

- Add to the variety of classroom activities and materials available in economics.
- Assist the teacher in overcoming the barriers to student learning that can increase the frustration level of both teacher and student.
- Offer an issues-oriented alternative to straight lecture in economics, making the course more interesting and relevant to students.
- Improve the quality of assessment in economics education.

The possible contributions are many. However, the list of what the handbook does not do is also lengthy. For example, this handbook does not attempt to:

- Make economists out of high school students, nor should it. There are already more than enough economists. According to Professor Thurow, when God made an economist in order to make the world a better place, the devil promptly retaliated by making a second economist, and nothing has been the same since.
- Provide a self-contained course in economics; instead, its activities are intended to fill in the gaps in the existing textbooks by providing applications that will help to develop critical thinking skills in economics, particularly in the area of microeconomics.
- List all of the resources available for use in economics classrooms; rather it provides a tool kit of basic resources for the busy economics teacher.

This handbook will make the greatest contribution to economics instruction when the classroom teacher uses it as a flexible resource to supplement the textbook and other ancillary materials, rather than as a self-contained course in economics.

In keeping with the authors' philosophy that this handbook should have the flexibility to develop and adapt to changing curricular needs, suggestions for additional classroom activities are welcomed. If you have an activity that you would like to contribute for consideration for future editions, particularly in the area of macroeconomics, please send it to the California Department of Education, attention Curriculum and Instructional Leadership Branch.

California State Department of Education
and the
California Council on Economic Education

Chapter 1

What Content Should a High School Course in Economics Include?

By: Dr. Marilyn Kourilsky
President and Executive Director - California Council on Economic Education

The content proposed in the following curriculum includes those economic principles and analytical tools that are just sufficient for students to begin to understand the economic way of thinking. The curriculum also introduces them to important factors in the national and international economy.

Since many economic concepts require an understanding of prior principles, the content is sequenced in accordance with the principles of task analysis (Anderson and Faust, 1973). The topics of the proposed course are compatible with the Master Curriculum (Joint Council on Economic Education, 1985) and California's *Model Curriculum Standards* (State Department of Education, 1985) and *History-Social Science Framework* (State Department of Education, 1988).

The recommended course includes five units. In Unit 1, the teacher introduces the importance of economics via the concept of scarcity, a central economic problem for all societies. The relationship between a society's economic structure and its patterns of resource ownership is then explored. Basic principles of the operation of a market exchange economy are then discussed, and a comparison is made between the assumptions and operation of a free enterprise and of a centrally planned economy.

In Unit 2, students are ready to scrutinize more closely the workings of a pure market economy. The instructional sequence should cover the principles of the market system, the functions it performs, the function of price, and the effects on such an economy of interferences with the price mechanism.

After this general introduction to the functioning of a market economy, students are ready in Unit 3 to focus on the principles of profit-maximization that govern the decision-making of individual firms. Students learn that the actual outcome of a firm's profit-maximizing behavior varies, depending on the market structure in which it operates. Analytical models describe the two extremes of market structure, competition and monopoly. Finally, the unit identifies the influence of these structures on firms' rational decision-making and the impact of firms' profit-maximizing (or cost-minimizing) behavior on market structures.

To maximize the students' understanding of market economies and price theory, units 1, 2 and 3 should be presented in the sequence described above (or a very similar one), because each unit depends on the students' mastery of the previous unit's content. From a learning point of view, units 4 and 5 are independent of units 1, 2, and 3. However, prior exposure to these units is helpful because it gives students experience in the economic way of thinking; it introduces them to a scientific habit of mind that may be applied to the process of making economic decisions.

In Unit 4 students learn the concepts necessary to understand what money is and how it functions. These concepts are then used to explain the monetary system and the role of commercial and central banking in our economy.

Unit 5 of the course then identifies and explains the determinants of national income, production and employment. Finally, this unit completes the course by presenting the principles and advantages of international trade.

Unit 1:
The Function of Economic Systems:
Deciding on What, How, and for Whom to Produce

1.1 Scarcity: The Central Economic Problem

When people are hungry, they want to eat. This is true regardless of a person's social status, cultural heritage, or belief system. The one thing people have in common is that they all have wants—not just for food, but for all kinds of things, from shiny floors to war paint. All people—not just selfish people—have wants. Altruistic people may want different things for different purposes (more time to devote to charitable causes, or more food to give to the poor), but they still have wants. To satisfy these wants, people work to transform the earth's resources into the goods they find desirable. Unfortunately, the earth's resources are scarce; that is, there are more human wants (possible uses for resources) than there are available resources to satisfy them. Moreover, once a decision has been made to use a resource in a way that satisfies one group, there may not be enough of it left to produce something that another individual or group wants.

Thus scarcity is the central fact of our economic existence: the earth's resources are limited, human wants are not, and scarcity arises as the inevitable mismatches occur between the amount of resources required to produce all of the goods people want and the amount of resources that are available to produce those goods. Scarcity thus forces every society to make important choices: What goods should it produce with its limited resources? How should these goods be produced? How much of a resource should be devoted to production of one good versus another? Who should get the goods once they are produced? The system a society uses for answering these questions—that is, the system by which a society allocates its resources among possible uses and distributes its wealth—is its economic system.

1.2. Influence of Resource Ownership on Economic Systems

Every known economy falls somewhere between the following two conceptual extremes. At one extreme is the centrally planned or directed economy and at the other is the market exchange (free enterprise) economy. Although all modern economic systems are combinations of these extremes, most economies can be usefully classified as predominantly either "directed" or "free."[1]

The type of economy a society has is determined by its patterns of resource ownership. Essentially, if the members of a society choose to honor social or collective ownership (or if one individual owns all of the resources), the result is a centrally planned or directed economy. In a directed economy, it is the planners who determine what is a "good" or "most valuable" allocation of resources and distribution of goods. If, on the other hand, the members of a society honor private ownership, a market exchange economy will develop. In a market exchange economy, a "valuable" or "good" use of resources is whatever the individual owners think it is.

1.3. Principles Governing The Allocation of Resources and Distribution of Wealth in a Market Exchange Economy

When two people voluntarily exchange goods, they both expect to be better off. In this way, exchange improves well-being. Since people like being better off, they are motivated to look for ways of making advantageous exchanges; that is, they try to exchange things that have little value to them for things they think are very valuable.

It is this interplay of private ownership, exchange, and people's desires to be better off that coordinates the allocation of resources and distribution of wealth in a market exchange economy. Since everyone owns some productive resource, even if it is only his or her own labor, and since people all want to be better off (wealthier), they are motivated to produce and exchange things that are highly valued by others at a low cost to themselves. Because everyone is doing this, the question of ***"what to produce"*** is decided:

> ***The society as a whole tends to use its resources to produce those goods that are most highly valued by its members.***

Since everyone wants to produce at the lowest cost to themselves, the question of ***"how to produce"*** the goods is determined as people try to figure out the lowest cost method of production. ***"How much to produce"*** is also decided:

---

[1] This discussion omits analysis of "traditional" economic systems, which solve economic problems according to established custom.

> ***People produce the amount that yields them the greatest profit.***

Even the ***"for whom"*** question is answered:

> ***The people who produce at lowest cost things that are most highly valued become the wealthiest members of society; those who produce nothing at no cost get nothing; and those who produce something nobody wants at great cost become debtors.***

1.4. The Free Enterprise Economy and the Centrally Planned Economy Compared

In a free enterprise economy, people are induced by the profit motive to produce goods that are highly valued by other members of their society. In a centrally planned economy, planners try to determine what goods are the most valuable and direct members of the society to produce those goods. Often they also tell the producers what price to charge.

One disadvantage of a free enterprise economy is that it tends to undervalue certain things that everyone would benefit from but no one wants to pay for—things like roads, public libraries and national defense. Hence even in relatively market-oriented economies, governments tend to intervene and make everyone pay a little bit (via taxes) to pay for goods that benefit everyone. One disadvantage of centrally planned economies is that planners usually have to guess which goods the society values most. Because producers are not allowed to charge as much for their goods as people are willing to pay (prices are set by planners), the planners never find out how much members of the society actually would be willing to pay. The result can be harmless, or it can mean that valuable resources are used to produce things that nobody really wants. Also, if people can't increase their wealth by increasing their productivity, they are less inclined to be productive than they would be in an exchange economy. Neither system is perfect, and neither eliminates scarcity.

Unit II:
A Closer Look At The Free Market System

2.1. Influence of Opportunity Cost on Demand and Supply, and Determination of Market Equilibrium

NEEDS VS. WANTS. Economists prefer to say that people have wants rather than needs. This is because needs seem more compelling than wants, which makes people forget that even needs can change depending on how expensive they are. For example, Ms. Williams may claim she needs electricity and say that she doesn't really need her dance lessons. If her electricity bill suddenly jumps from $30 to $130/month, however, she may prefer to turn her thermostat down if it means she can keep on dancing. Economists therefore prefer to speak of people as having wants, a word that more accurately reflects how flexible people's "needs" really are.

OPPORTUNITY COSTS. People turn their thermostats down and make other adjustments when the price of electricity rises because the opportunity cost of continuing to consume large quantities of electricity has gone up. Opportunity costs are the direct result of scarcity. Once we decide to use our resources in one way, we cannot then use those same resources in some other way. The opportunity cost of using our resources to purchase a particular commodity is equal to the value of our second choice—the value of our next best opportunity. People choose courses of action that have the lowest opportunity cost.

DEMAND. Opportunity costs are implicit in economists' conceptualization of demand. Demand is not just a concept describing how much people want some commodity. It describes how much they want it given that it has an opportunity cost. Demand is desire backed by willingness to purchase. It shows the attractiveness of a good relative to the amount that has to be sacrificed to obtain it. This relationship is usually expressed via a demand schedule, which is simply a series of prices and corresponding quantities that shows how much of a good will be purchased (per time period) at different prices.

It can be quite difficult to specify exactly what demand for a given commodity will be, since many factors—including people's tastes and incomes, and the prices and availability of good substitutes for the commodity—come into play in its determination. Whatever else may be said about demand, however, it does have one dominant attribute. This attribute is so characteristic and reliable that it is often referred to as the law of demand. The law of demand states simply that there is a negative relationship between the price of a commodity and the amount of it which is purchased. That is, if something costs more, we won't tend to buy as much of it; and if it costs less, we will buy more of it. This means that the correspondence of the prices and quantities listed in a demand schedule is not chaotic; plotted on a graph (with price on the vertical axis and quantity on the horizontal axis), the price/quantity pairs from a demand schedule can be connected to form a demand curve, and the demand curve will slope downward to the right.

For some goods, a small increase in price will result in a large reduction in quantity demanded; for others, a small price rise results in only a very tiny decrease in quantity demanded. This phenomenon, called elasticity of demand, also contributes to the shape of a commodity's demand curve. Mathematically, elasticity of demand for a good is a ratio equal to the percentage change in quantity purchased due to a percentage change in the price (% change in Q divided by % change in P). The changes are stated in percentages in order to make them comparable. This ratio expresses how responsive the quantity demanded of a product is to changes in its price.

SUPPLY. Supply has much in common with demand. The link is opportunity cost: producers will try to use their resources to produce those goods that have the lowest opportunity cost. If Mr. Baker pays $2.00 for the ingredients required to make either a chocolate cream pie or a chocolate cake, and if chocolate cream pie sells for $3.50 but chocolate cake sells for only $3.00, Mr. Baker will bake and sell chocolate cream pies since that is more profitable. Notice that baking pies also has the lower opportunity cost: the opportunity cost of baking pies is the $3.00 Mr. Baker could have received for each cake, but the opportunity cost of baking cakes is the $3.50 Mr. Baker can receive by baking pies. Supply is thus a relationship showing the attractiveness of supplying a good given that supplying it has an opportunity cost. A supply schedule shows how many units of a commodity suppliers will be willing to produce (per time period) as the price they receive for the commodity varies. Supply curves also have a dominant characteristic: the more suppliers are offered for their goods, the more they will be willing to supply, all else equal. Hence, supply curves slope upward to the right.

It is tempting to think that the costs of suppliers and producers are stable, but they are not. The costs of suppliers are, after all, the prices they pay for the various resources (inputs) used to make their products, and these prices reflect demand for those inputs in their next best uses (their opportunity cost).

EQUILIBRIUM. If demanders all want to purchase at a low price and suppliers all want to sell at a high price, how can demand and supply ever be equal? They can be equal because people's subjective values for goods are almost always different from the dollar prices of the goods. Suppose we know that in a certain community, 100 hammers per month are sold at a price of $15. Most of the hammer users who made the purchase would have paid more for the hammer if it were not available at $15; probably only one or two of them felt that $15 was the maximum they would pay for the hammer; and those who did not buy it felt that $15 was too much to pay for that hammer. Similarly, those 100 hammers were supplied by toolmakers, most of whom would have been willing to supply them for less; more hammers were not supplied at that price because there are also many suppliers who won't bother to make hammers unless they can get a higher price for them. The market clearing price, or equilibrium price, is the one at which the amount suppliers are willing to supply at that price just equals the amount consumers are willing to purchase at that price.

NOTE:* *This idea will be much easier for many students to see and comprehend if it is illustrated with a graph.

2.2. The Function of Market Price and the Role of Profit

Scarcity necessitates rationing: given limited resources, whose wants are to be satisfied? Those who are the strongest? Oldest? Youngest? Prettiest? Any of these criteria will work, and a variety of them are in use. For example, good grades are traditionally rationed according to some criterion of high scholastic achievement. In an exchange economy, however, most goods are rationed via prices; the criterion used is willingness and ability to pay the price.

This is the first function of price: to ration scarce goods among would-be consumers. Prices also serve another very useful function: they help allocate resources to their most valued uses over time. Producers get information about what this most valued use is via the profits they earn.

Profits are the result of two sets of prices: the price the firm receives for its products, and the price it pays for the resources used to produce those products (its costs). If a firm's profits decline, it is either because (1) demand has fallen—people are unwilling to pay as much for its product, or (2) its costs have risen (remember to think in terms of opportunity cost: a rise in the firm's costs mean that demand elsewhere for some of the firm's inputs has risen). Either way, falling profits motivate firms to find more valuable (or efficient) uses for their resources. On the other hand, if a firm's profits rise, it's either because the firm's costs have declined or demand for the firm's product has increased. Rising profits motivate firms to find ways of producing more of the product. In this way, the profit motive induces firms over time to divert resources from their current uses into uses which other members of the society value more highly.

NOTE:* *At this point the instructor may wish to use the concept of opportunity cost to help explain the often misunderstood economic principle which distinguishes normal profit, which is interpreted as a cost, from economic profit.

2.3. Imperfections of and Interferences with the Market Price Mechanism

The price mechanism is not a perfect rationing device. Some people think it is quite unfair that people with higher incomes get to eat filet mignon when poorer people can't, and suggest that filet mignon should be affordable to everyone. This is an appealing idea. It's so appealing that legislators sometimes impose price ceilings on certain goods in hopes of making them more affordable. A price ceiling is a legally imposed limitation on the price of some commodity. The imposed price is lower than the market price would be; sellers are forbidden to charge more and buyers are forbidden to pay more for the good. However, lowering the price of filet mignon does not eliminate the problem of scarcity. If the price of tenderloin were set at $1.50 per pound, everyone would rush to buy it. A few would take some home, but the majority would leave disappointed. The price ceiling thus creates a shortage of filet. Over time, the people who are willing to wait in line for 3 hours to buy tenderloin are the ones who will eat tenderloin. Notice that rationing is still occurring, only now the price being paid is not being paid in dollars, but in time spent queueing for steak.

Occasionally, legislators may wish to impose a price floor. The intention may be to save a firm or industry from losses that seem unfair. A price floor is an enforced price that is set above the market price, making it unlawful to sell or buy at a price below the minimum. The effect of a price floor, however, is to create a surplus (excess supply) of the goods or services, because the quantity demanded at the enforced price is less than the quantity sellers want to offer. Resources must then be spent figuring out what to do with the surplus.

Price ceilings and floors are rather blunt economic instruments. Their value is debatable because their attempt to correct one of the faults of the price mechanism simultaneously destroys its most valuable attributes.

Informative as the price mechanism is, there are a few situations in which the information it provides is incomplete. Any time a firm incurs costs to others for which it does not have to pay (as when a textile producer pollutes a stream so that the water is no longer usable by a farm and a chemical factory downstream), the price mechanism induces it to produce too much. That is, people in the society want the textiles, but they do not want the pollution. Because of the pollution, people can not drink or swim in the water, and they have to pay more for the farmer's crops and the chemicals, because the farmer and the chemist had to install equipment to purify the water before they could use it. If they could, the farmer, the chemist, and everyone else would probably like to strike a compromise with the textile firm in which they would agree to pay more for the fabric if the firm would pollute less. Similarly, when firms create benefits for which they are not compensated, the price mechanism induces them to produce too little.

Such situations invite government intervention. For example, the government could impose a limit on the textile firm's production of pollution. It would be more economically efficient, however, if the government taxed the firm a certain amount per unit of pollution, because the textile firm would then simply consider the tax to be part of its costs and adjust its production of textiles to maximize profits given the new cost figures. Taxation is not a problem-free solution, however, because governments typically don't have enough information to know what tax rate is optimal.

Unit III:
Firm Behavior and Different Types of Market Structures

3.1. Rational Decision Making by the Firm: Profit Maximization

The amount of a commodity that a firm is able to sell depends on demand for that commodity. Since the quantity demanded depends on the price the firm charges, the firm implicitly chooses how much to produce when it chooses a price to charge.

How do firms decide how much to charge for what they produce? Many people think (even many firms think) that firms add up their costs and add a percentage ***mark-up***. However, these percentages vary among firms, and even vary among the products of a single firm. Whether they know it or not, firms attempt to choose prices that will maximize their profits given what they know about demand for their product. The following examples show profit-maximizing behavior:

1. *If a firm is producing as much as it can and customers still want more, the firm will raise its prices: its profits will be greater.*
2. *If a firm cannot sell as much of its product as it expected to sell, it may try lowering its price in order to sell more.*

It turns out that a firm's profits are maximized when it charges a price (and produces the quantity demanded at that price) such that its marginal revenue equals its marginal cost. In the above mentioned examples, the firms were searching for such a price. But what does it mean?

A firm's marginal revenue is the change in (or addition to) its total revenue resulting from the sale of an additional unit(s) of its product. At first one might think that the marginal revenue the firm receives is equal to the revenue from the additional sales (price times number of additional units sold). This would be true if a firm could sell additional units without changing the price of the commodity, but downward sloping demand dictates that if more units are to be sold, the firm must charge a lower price. It would also be true if the firm could charge each consumer the maximum amount that person would be willing to pay. But most producers have no way of distinguishing people who value their products highly from those who do not, so they have to charge one price to all their customers. Usually, therefore, when a firm lowers a price in order to attract new buyers, it must simultaneously lower the price to the old customers. This means that the change in total revenue (marginal revenue) involves both a gain and a loss. The gain is the money received from the new sales, and the loss is the money foregone by lowering the price to old customers who were willing to pay the higher price. Hence marginal revenue is almost always less than price times the number of additional units sold.

Marginal cost is the change in (addition to) the firm's total costs attributable to production of additional units. Since fixed costs, by definition, are costs which do not change, they are not marginal costs. The marginal cost to Mr. Baker of making 10 extra chocolate cream pies is the cost of his extra labor and the extra flour, sugar and other ingredients required for the pies. Mr. Baker's mortgage payment does not change, nor do his payments on the equipment in the bakery. These costs are sunk costs; expenditure commitments that have already been made and leave no opportunity for further choice. Sunk costs are irrelevant to profit-maximization.

NOTE: In the long run, all costs are subject to change; there are no fixed or sunk costs in the long run. Hence, in the planning stage, the cost of building a new facility vs. the cost of expansion is a relevant cost and must be taken into account before the choice is made. It is only after funds are committed that such costs are irrelevant to profit-maximization.

We still need to know why profit maximization occurs when marginal revenue equals marginal cost. It helps to see what happens when they are not equal. When they are not equal, there are two possibilities:

1. *Marginal revenue is greater than marginal cost.*
2. *Marginal revenue is less than marginal cost.*

If marginal revenue is the greater amount, then producing and selling additional units is adding more to the firm's total revenue than it is adding to the firm's total cost. Since a firm's total profit is equal to its total revenue minus its total cost, the production of additional units is adding to the size of total profits; therefore the additional units should be produced and sold. The firm should continue to produce more and more units, selling them at lower and lower prices, until it is no longer profitable to do so. When is that? It becomes unprofitable when producing the additional units begins to add more to the firm's total costs than the sale of those units adds to the firm's total revenues—that is, when marginal revenue is less than marginal cost. At this point, the firm's profits may still be quite high, it's just that the profits are no longer at a maximum.

Firms are similar in the sense that they are all motivated to maximize profits; otherwise, however, they are quite different. They make different products, and the markets for those products vary significantly. The next two sections show that the market structure in which the firm operates has a powerful impact on the amount of profit the firm can earn.

3.2. Perfect Competition Model

The model of perfect competition makes four assumptions about the market structure it describes. First, the model assumes that all firms in the market are producing a homogeneous product (one whose attributes cannot easily be altered in order to distinguish it from the product offered by competitors—for example, wheat is homogeneous, but clothing is not). Its second assumption is that the product is relatively easy to produce so that there are many sellers. Third, there must also be many buyers; and fourth, there must be perfect information (where everyone knows, e.g., how much of the product is available, how much it costs, from whom it may be obtained, etc.).

In this model, producers are price takers, which means that as individuals, none of them will be able to increase their profits either by raising their price above the market price, or by lowering it. So they "take" the market price, because their profits will be highest if they do. No individual producer has much effect on the market price because it is instantaneously determined by all the forces of supply and demand in the marketplace—that is, by all of the producers' actions, and by the actions of all the buyers. It is helpful to look at the dynamics of these actions.

Since buyers know all the prices being charged, they will buy from the lowest bidder. Since none of the product will be purchased at a higher price than that offered by the lowest bidder (which, incidentally, means that the individual firm's demand curve is perfectly elastic and graphs as a horizontal line), and since all of the product offered by the lowest bidder will be purchased, sellers compete to be the lowest bidder. If that opportunity is missed, they hurry to at least match the price of the lowest bidder. As long as the industry price remains higher than firms' marginal costs, however, firms will be earning economic profits, and even more firms will want to enter the market, which will produce even more downward pressure on the price as firms compete to be the lowest bidder. This downward spiral of the price stops when price equals marginal cost. Even the industry's lowest bidder will not charge less than its marginal cost; if it did, it would earn less than a normal profit and should look for a more valuable way of using its resources. When price equals marginal cost, the industry is in long-run equilibrium: the industry no longer attracts new firms since only normal profits are being earned. (The value that formerly went to the producers in the form of economic profit has been transferred to the consumers in the form of a bargain price.)

Finally, since demand is perfectly elastic, the price charged for a unit of product is equal to the marginal revenue received when it is sold. As noted above, price also equals marginal cost. But if price equals both marginal cost and marginal revenue, then marginal cost equals marginal revenue-which means that the firms are maximizing profits!

It can be shown that if all firms were perfect competitors, they would produce the maximum amount of the most valued goods at minimum cost; furthermore, there would be no economic profits, because every opportunity to increase wealth would have been found and exploited. (It is this disappearance of economic profits which leads many people to assume—mistakenly!—that sellers in competitive markets are not motivated by profits, an idea which prompts the further mistaken assumption that they must therefore be nicer than other business people). These are very desirable features, and the model of perfect competition therefore represents a kind of ideal. However, the conditions for perfect competition are so stringent that only a few markets even approximate this ideal.

Though perfect competition is impossible to achieve, it is traditionally argued that the more closely a market approximates this structure, the better off society will be. This is roughly the sort of thinking which inspired the antitrust legislation passed late in the 19th century. However, the success of this legislation has been controversial at best, and many economists now question whether perfect competition is necessarily the best market structure for every market.

3.3. Model of Monopoly

By contrast, monopoly is a market structure characterized by one seller. This type of market may develop when one person or firm has an exclusive right to produce some commodity, or when the product itself is so difficult or expensive to produce that others are discouraged from the attempt. Since the monopolist is the only producer of the commodity, the monopolist's demand curve is not different from the industry demand curve, and is therefore relatively inelastic. This means that the monopolist can raise the price of the commodity without losing all of his or her customers. It also means that the monopolist's marginal revenue will be less than the price. Since there are no competitors to bid the price down, there is no pressure on the monopolist to lower the price, so the monopolist is completely free to choose whichever price maximizes profits. The price set by the monopolist will therefore be a price such that its long-run marginal revenue will equal its long-run marginal cost.

Since marginal revenue is less than price, the monopolist will produce less of the good and sell it at a higher price than the perfect competitor. Also, economic profits are retained by the monopolist rather than transferred to the consumer. This model tends to conjure up images of large firms reaping huge profits at the expense of consumers. Monopolists have a bad reputation.

Again, the government can intervene, and again there are problems with intervention. Here are two of the problems: (1) Who is a monopolist? Ms. Byrd makes shoes out of chartreuse feathers; it's the only thing she knows how to do. It is probably true to say that Ms. Byrd is not much of a threat to Nordstrom. It is equally true, however, to say that she is a monopolist of the chartreuse-feather-shoe-market. Should the government intervene? This is an absurd example, but the problem is real. The determination of whether a firm is a monopolist or not depends on how the market is defined. Is Nordstrom a monopolist in shoe sales world wide? in low-end shoes? in women's shoes? in women's upper middle class shoes sold on the west coast? sold in Portland, Oregon? Some people make lots of money trying to answer questions like these. (2) Some monopolies ***(they are called natural monopolies)*** seem to be beneficial. How can that happen? Since monopolists are able to keep the profits they earn, and since profits increase as costs decline, monopolists are induced to produce at minimum cost. Some monopolies find that their costs are minimized (and profits maximized) when they produce on a very large scale. If a firm large enough to produce on that scale can serve most, or all, of the demand for the good, it is a natural monopoly. Consumers can actually benefit from this, because even though the firm is maximizing its profits, its costs are so much lower than smaller firms' costs would be that consumers can buy more of the product at a lower price from the monopolist than they could from smaller firms. For example, it would be very expensive if we had as many automobile manufacturers as we have bakers.

Unit IV:
Money and the Banking System

4.1. The Value of Money

In Units 1, 2 and 3 the existence of money was taken for granted. It hasn't always existed, but it has been around for so long that many people—although they know money is valuable—have forgotten the real reason why.

The real wealth of a modern society can be measured in money but is not equal to money. A society's real wealth is the value of the goods and services it produces from its scarce resources. Since a dollar bill can't be eaten, slept upon, ridden or worn very effectively, why does it have value? Its value is derived from its usefulness in facilitating exchange. The presence of money means that if Mr. Walker makes flutes, he doesn't have to travel till he finds a farmer and a tailor who also happen to want some flutes before he can get some food and clothes. Mr. Walker can simply exchange (sell) his flutes for money, and use the money to buy whatever goods he chooses to purchase.

Money is valuable only as long as a community accepts it in exchange for real goods and services. Since the value of money stems from its function rather than its substance, money can be (and has been) almost anything, from pieces of metal to pieces of paper. Sometimes paper money is "backed" by a scarce metal such as gold. This means that the paper money can be exchanged for (or converted to) gold. This backing may lend an aura of respectability to paper money, but does not guarantee that it has value unless the gold, too, can be converted further into real goods and services.

Money positively influences an economy by reducing the cost of trading. It can also be a negative influence because consumers and firms make real wealth decisions in terms of money instead of in terms of real goods and services. For example, in an economic downturn, people may save money to protect themselves in case they lose their jobs. Because they don't spend as much, firms can't sell as much. Firms then reduce their production, which further exacerbates the recession. Therefore, although it is important to remember that the availability of goods and services is what really determines the well-being of the members of a society, it is true that monetary factors influence this well-being through their influence on production decisions and the consequent utilization of resources. If a society's monetary system breaks down, its economic system also tends to break down.

4.2. Commercial Banking

People don't want to keep all of their wealth in the form of money (they wouldn't have any real goods that way) anymore than they want to have all of their wealth in the form of real goods (they'd have to sell their shirts or cars before they could go to the grocery store). In an exchange economy people want both real assets and the convenience of money. They therefore hold some percentage of their wealth, which they think will be enough to meet their needs for purchasing flexibility and unexpected expenditures, in the form of money. Some of their money is kept as cash; larger sums are deposited in depository institutions such as commercial banks in the form of checking and savings accounts (demand deposits and time deposits). People deposit their money in banks (rather than in their cookie jars) partly to protect it from theft, but mostly so that it will earn interest.

Banks pay interest on savings accounts, and on some checking accounts. Why? To begin with, banks earn money by lending. When people borrow money from the bank, they agree not only to pay the money back, but to pay the bank an additional amount (interest) for the privilege of using the money. Banks find that they can safely lend an amount equal to a large percentage of the amount of money deposited with them (and thus earn a good interest income) and still have enough money in reserve to meet their customer's demands for cash. So they do. The more banks lend, the more money they make; and since they can lend only a percentage of the money people deposit, they are usually better off the larger those deposits are. Hence banks try to induce customers to deposit more money in their checking and savings accounts by paying interest on those accounts.

It is important to point out that banks don't lend the money which is actually in their customer's savings accounts and checking accounts. When the bank approves a loan for $10,000 to Mr. Walker so that he can buy a flute factory from Ms. Peabody, it doesn't debit anyone's account. The bank simply writes a check for $10,000 to Mr. Walker. The bank 'creates' the money. The amount of money circulating in the economy is thus larger for awhile. When the loan is repaid, the created money is "destroyed." If there were only one bank, the money supply would thus shrink back to its original size. Since there are many banks, however, something else occurs. When Mr. Walker uses the loan to buy the flute factory, he writes Ms. Peabody a check for $10,000. She deposits the check in her bank. ***This transaction does not create money; it just transfers ownership of the demand deposits.*** However, now Ms. Peabody's bank has $10,000 more deposits. Because the U.S. Federal Reserve Bank (about which we will learn more in the next section) only requires that a fraction of that amount be kept in reserve, Ms. Peabody's now has more money to lend. Suppose the Federal Reserve Bank requires that 10% of all deposits be kept in reserve. Then Ms. Peabody's bank can lend the other 90% of its new deposits, or $9,000 to someone else. Suppose it does: Ms. Peabody's bank approves a $9,000 loan to Mr. Mayo. When it writes him a check, an additional $9,000 is created. As this process continues, the money supply expands. There is not really any problem with this as long as production of real goods and services is expanding, too; but if money expands much faster than real production, inflation can result.

4.3. The Central Banking System

There have been historical instances in which banks have been tempted to lend so much money that the money they had in reserve was not enough to accommodate their customers' needs for cash. Most economies therefore have a central bank which establishes a reserve requirement and exerts other controlling influences on the behavior of commercial banks. The United States central bank is called the Federal Reserve Bank **(The "FED").**

The FED functions independently from U.S. government institutions. Its primary role is to regulate the amount of money in circulation so as to promote a realistic level of economic activity and prevent large fluctuations in economic cycles. Its major tools for this purpose include its right to establish the reserve requirement, through which it is able to limit the collective ability of the banking system to create money, its ability to raise or lower the rate of interest it charges to banks (the discount rate), and its ability to buy or sell government securities in what are called open market operations. These tools allow the FED to influence the reserve levels and lending policies of the entire banking system. Through them, the FED has considerable power to limit the collective ability of the banking system to create money.

NOTE: ***For advanced classes, the teacher may want to further examine the relationship of the FED to commercial banks, and its ability to exert monetary controls, by exploring the mechanics of open market operations, and the effect of changes in the discount rate and the reserve requirement on commercial banks' lending.***

Unit V:
National Income and the Principles of International Trade

5.1. The Levels of Income, Output, and Employment

The real value of a society's output is equal to the value of all the resources, including labor, used to produce that output. It is also equal to the real value of a society's income, since payment for the use of these resources becomes the income of the resource owners.

Because of this equivalence, the level of a nation's income, output, and the level of employment of its resources, are all totally interdependent. The level of a nation's income is determined by the level of employment (and the efficiency of use) of its resources. In a market exchange economy, the level of employment is determined by aggregate demand which, since it includes the sum of each individual's purchases, is largely determined by individuals' incomes. And the level and efficiency of employment determines the level of output.

If a society hopes to expand beyond a level at which it is only producing goods for immediate consumption, it must save some of its output for investment in expanded production. Put another way, it must save some resources for use in the production or expansion of plants and equipment which will increase the productive capacity of the economy. Suppose, for example, that a certain Jake Crusoe awakes one morning to find himself washed up on a desert island after a storm at sea, and that he is subsequently saved from certain death by the sudden appearance of a year's supply of corn which has serendipitously fallen out of a passing helicopter. Jake has a couple of alternatives. He could eat all of the corn this year and starve next year, or he could reserve some corn to plant and harvest. With a good crop, he would have enough corn to feed himself and to plant a new crop the following year. There might even be enough to set aside on the chance that there will be an opportunity to do some trading in the future. Jake is likely to prefer being a little hungry this year to starving next year. If these are his opportunities, he will probably defer some present consumption (go hungry now) in order to invest in expanded production (plant some corn) that will improve his future well-being.

NOTE:* *At this point the teacher may want to introduce the notion of deficit spending and its alleged consequences. For advanced classes the teacher may want to expand on the importance of investment and explore the relationships between saving, investment, growth, and employment.

5.2. Economic Policy Making: Objectives and Practice

Ideally, economic policy makers want to increase the wealth of their society. Whether they employ monetary or fiscal policy, their objective is to stimulate, but control, economic growth. Since aggregate demand plays such an important role in the determination of a society's real income and output (and hence its wealth), policy makers attempt to control the economy by influencing aggregate demand. Aggregate supply is also very important, of course, but policy makers find it much more difficult to have a direct or immediate influence on aggregate supply.

Economists typically divide aggregate demand for goods and services into four components:

1. *The demand for consumer goods and services* ***(consumption spending)****.*
2. *The demand for goods and services used in production* ***(investment spending).***
3. *The government's demand for goods and services* ***(government spending)****.*
4. *Net exports, an amount which is computed by subtracting imports* ***(domestic demand for foreign goods)*** *from exports* ***(foreign demand for domestic goods).***

Public policy decisions may influence some or all of these components.

Two common problems that economic policy makers try to control are inflation and recession. Neither an inflation nor a recession is particularly harmful if it is both small and predictable. It is when inflation (or recession) becomes significant and unpredictable that it creates problems.

Inflation is a decline in the purchasing power of money. During inflationary periods, aggregate spending is high and eventually contributes to a situation in which relatively more dollars are being spent on the same amount of goods and services. This may occur when the nation's real output/income is not expanding as fast as the money supply. Recessions occur when there is a decline in aggregate spending; characteristically, recessions are accompanied by inventory build-ups, decreases in money income/output, employment, profits, and real wealth.

Monetary policy attempts to control inflation and recession by influencing the availability of money and credit. A **"tight"** money policy is anti-inflationary. Essentially, the policy makers work to restrict the growth of the supply of money in circulation. The central bank removes money from circulation by selling government securities and, more importantly, acts on the ability of commercial banks to create money by increasing the interest rate to banks, thus making it less attractive for banks to lend money. An **"easy"** money policy is exactly the reverse, and is employed to combat recessions.

Fiscal policy tools for controlling inflation and recession are, essentially, the government's use of tax policy and its own spending power to influence the level and composition of aggregate demand.

NOTE: ***For advanced classes the teacher may want to explain and analyze how inflation and recession can co-exist as a result of an easy money policy.***

5.3. Principles of International Trade

Just as voluntary exchange between individuals makes them better off, so does voluntary exchange between nations. If the U.S. produces more wheat and fewer cars than it wants, and Japan produces more cars but less wheat than it wants, each will be better off if the U.S. gives Japan some wheat in exchange for some cars.

Two countries can benefit from trade even if one of them can produce everything more efficiently (less expensively) in absolute terms than the other one can. If the less efficient country is relatively more efficient at producing, say, bananas, then the less efficient country will be better off if it specializes in banana production, and exchanges the bananas for some of the super-efficient nation's goods. The super-efficient nation is better off, too, because it can now devote the resources it would have spent on banana-production to production of a more valuable commodity.

Economists would say that the less efficient country has a comparative advantage in banana production. This phenomenon helps to explain the profitability of trade between advanced economies and less developed ones. According to the 'theory of comparative advantage,' the greatest opportunities for advantageous exchange will occur if each nation specializes in those goods which it can produce relatively more cheaply (those goods in which it has a comparative advantage).

Even though such exchanges are profitable, countries sometimes resist this trading. Suppose Japan were so much more efficient at making cars than Italy that Italian consumers would be better off, in the long run, to buy all their cars from Japan and devote their car production resources to something else. Italy might not jump at this chance, because in the short run, all of the people in Italy's automobile industry would be out of work, as well as many of the people in supporting industries (i.e., Italian steelworkers).

Another complication in international trade is that the currency and monetary policy of each country is different. This difference can create some confusion as trade creates a demand for the currency of the selling country and a supply of the currency of the buying country.

The **"balance of payments"** of a nation indicates how it stands relative to the rest of the world. If a country imports more than it exports, a trade deficit is the result. If a country exports more than it imports, it will have a trade surplus.

California State Department of Education
and the
California Council on Economic Education

Chapter 2

Ten Suggested Modules for Teaching Economics

Dr. Robert Harris
California State Department of Education

Dr. Bill Kerby
Center Director - CSU Sacramento

Dr. Jim Charkins
Center Director - CSU San Bernadino

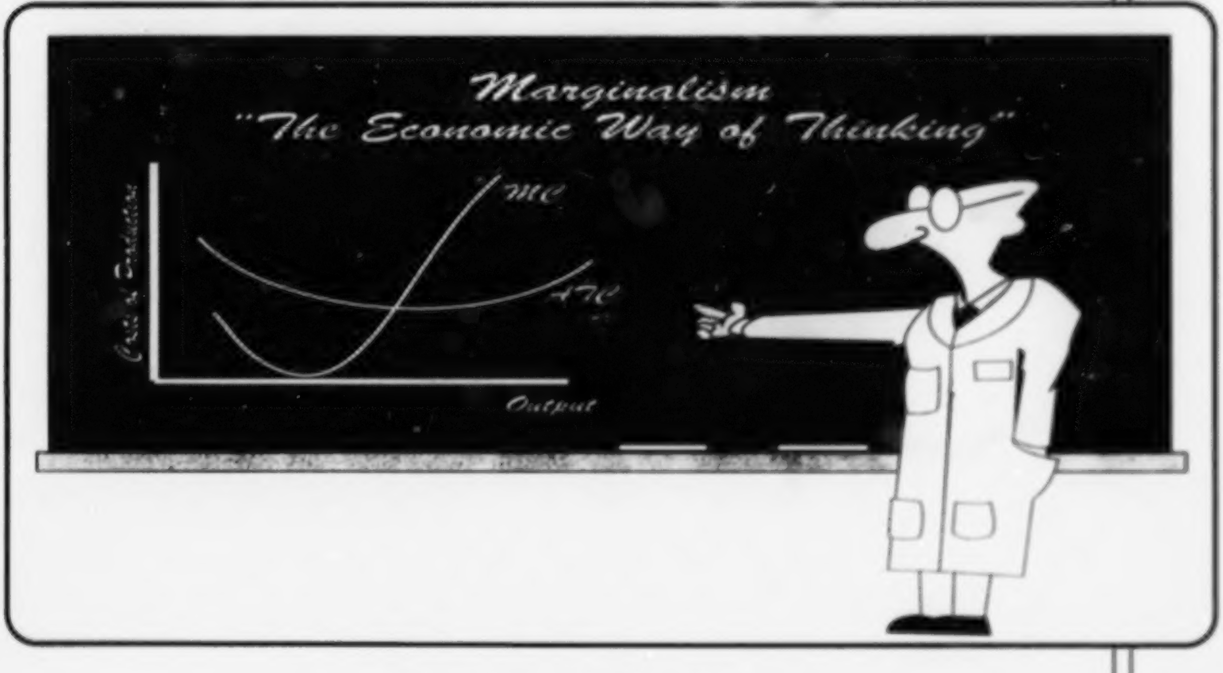
Ed Van Brenk
Mentor Teacher - Elk Grove Unified School District

This chapter contains issue-oriented activities to bring alive the economic concepts described in the first chapter. The 10 modules provide a series of "surgical strikes" to make students **want** to study economics. The modules can be used independently or as part of a package to supplement any of the standard economics textbooks.

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

MARGINALISM: "THE ECONOMIC WAY OF THINKING"


Marginalism
"The Economic Way of Thinking"
MC
ATC
Costs of Production
Output

COULD IT BE THAT:

THINGS ARE NOT ALWAYS AS THEY SEEM?

Marginalism:

THE ECONOMIC WAY OF THINKING

COULD IT BE THAT:

THINGS ARE NOT ALWAYS AS THEY SEEM?

PRIMARY ECONOMIC CONCEPTS

- Marginalism
- Sunk cost

LEARNING OBJECTIVES

This module will enable students to:

- describe the concept of sunk cost and how it operates in day-to-day decision-making.
- explain how marginalism relates to a way of thinking, for an individual or a nation, in an attempt to maximize well-being.

POTENTIAL LEARNING HURDLES

Students often have trouble with the idea that a cost can be irrelevant. It seems contrary to common sense. They have all heard of business people who say they "can't afford to sell below cost" and of people who doggedly perservere at something to "make it worth the investment." For some concrete examples which may help to dispel these ideas refer to "Learning Hurdle #7" in chapter 3.

BACKGROUND

If there is a single characteristic that separates economists from other people, it is reliance on marginalism. The "economic way of thinking" involves looking at problems at the margin, that is, in terms of incremental changes. Indeed, economist James Buchanan argues that marginalism is the litmus test of economic understanding. This is consistent with the notion that economics is all about decision-making. Making intelligent decisions requires weighing costs and benefits. Of course, some irrelevant costs can (and should!) be ignored in making a decision. Specifically, we should exclude any sunk costs that will be borne regardless of our present decision. Economists define cost as opportunity cost, which is the value of foregone opportunities. Sunk costs are not affected by our decisions; therefore, they should not be considered costs of those decisions.

Dr. Marilyn Kourilsky of UCLA explains the apparent paradox in the following way: Suppose that you have paid $100 for a theater ticket. Unfortunately, the play turns out to be a total waste of time. After the first act, you decide that sitting at home watching television reruns would be more exciting. Would the $100 that you paid for the ticket influence your decision to stay or leave? The economic way of thinking suggests that the sunk cost of a ticket is not relevant for your decision. Your decision now should be based on the additional benefits and additional costs of another hour sitting in your reserved seat. If the play gives you negative satisfaction, then sitting through it only adds to the $100 that you have already lost. On the other hand, if the play gives you more satisfaction than any other use of your time, then it is worth staying, even if it does not give you $100 worth of satisfaction. In either case, the $100 is already gone, and no choice can bring it back.

NOTES TO THE TEACHER

This will surely seem counter intuitive to many, or even all, of your students. The activities that follow are intended to provide concrete examples of marginalist thinking. Remind your students that sunk costs were not always irrelevant; before they became sunk, they were opportunity costs of earlier decisions. Buying a $100 play ticket, for example, means giving up the chance to use the $100 on something else. Using the ticket, however, does not involve a $100 opportunity cost, unless in using the ticket, you must turn down another person's offer to buy your ticket.

It is a good idea to reinforce this concept early (and often) in the course, because it is a basic building block in economics. As examples, the following concepts cannot be explained fully without marginal analysis:

- COMPARATIVE ADVANTAGE—countries trade based upon their marginal costs and benefits of such trade.

- SUPPLY AND DEMAND—marginal cost of production is the supply curve, just as the demand curve is the marginal benefit from additional consumption.
- BUDGET POLICY—to the extent that all but 12% of federal spending is locked in by prior legislation, marginal analysis suggests that we look at the discretionary 12% of the budget in evaluating fiscal policy. Similarly on the revenue side, we analyze the impact of tax cuts or hikes by holding all else equal and looking only at the marginal impact of the tax change.

OTHER ACTIVITIES

1. Show your students the following table:

Automobile Expense

Expense categories:	Cost/mile
Depreciation	6.3 cents
Maintenance	5.5 "
Gas & oil	5.5 "
Parking & tolls	3.2 "
Insurance	2.5 "
Taxes	1.6 "
Total cost per mile	24.6 cents

Ask the class to identify the cost of driving additional miles in a car that is already owned. Point out that some costs would exist even if the car remains parked in a garage. Note that depreciation is mainly a function of age, rather than mileage. Similarly, insurance is determined mainly by the make and model and driver characteristics, rather than miles driven. Therefore, the opportunity cost of driving a car is the incremental cost of fuel, repairs, parking, and tolls, plus the taxes on those incremental costs. Conduct a discussion of the fair level of employer reimbursement for automobile expenses if students take a part-time job delivering pizzas. Ask if they would be making money or losing money if they receive $.23/mile for expenses. (They should realize that this would cover all of their marginal costs, plus contribute something toward the sunk overhead costs of insurance and depreciation that they would have paid anyway). To see if they understand that sunk costs were not always sunk, ask them what the proper reimbursement would be if the job requires them to purchase a car that they would not otherwise need. They should realize that at this point, no costs are sunk. In this case, the entire cost of owning and operating the car is an opportunity cost of the pizza delivery job.

2. After completing Handout #1 - "An Exercise In Marginalism," if your students are still skeptical, try actually measuring the amounts of string required. You could use increasingly larger Styrofoam balls from a craft store to snow that each additional inch of diameter adds 3.14" of circumference, regardless of the absolute size of the ball.

ANSWERS TO HANDOUTS

Answer to Handout #1

Option "c" is the correct answer. In both cases the overall diameter has increased by 2 inches. It doesn't matter whether the string went around a baseball, basketball, or the entire earth, in all cases the increase in the diameter is still only 2", so the circumference increases by 6.28" ($\pi \times 2$ inches).

This is a good example of the "economic way of thinking." What is important is not the "sunk cost" of the amount of string already used, but the "marginal" or additional amount of string needed. Sunk costs are sunk and are thus better off forgotten in making future decisions.

You might ask students what bearing their grade point average has on their current grade in your class? Answer: nothing. Whatever their grade point average is, that is sunk and therefore has no bearing on the grade they will earn in your class. This is called "thinking on the margin."

Answers to Handout #2

Problem #1: While on the average, it costs this person $.50 per hamburger he was still not wise to turn this business away from an economist's perspective. By "equating at the margin" he would have realized that his additional (or marginal) revenue is greater than the cost to produce those extra units. Marginal cost = $200 and marginal revenue = $250 (.25 times 1,000). In this case he lost the opportunity of an additional $50 worth of income.

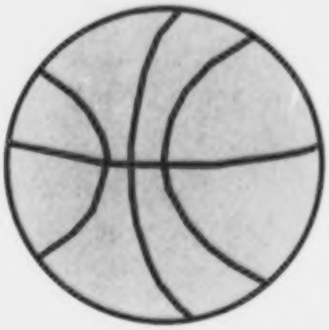
Problem #2: The amount of seats on an airplane are what economists refer to as "sunk costs" which cannot be adjusted in the short run. By equating at the margin, the economic way of thinking reasons that if there are people who are only willing to pay $75 for a seat, that is still $75 more than you would have received if the seats remained empty.

Overhead Master #1

An Exercise in Marginalism

Suppose that you have 2 pieces of string:

A. Piece of string #1 is just long enough to wrap itself one time around the baseball you see below.
B. Piece of string #2 is a longer piece, yet it is just long enough to wrap itself one time around the basketball .



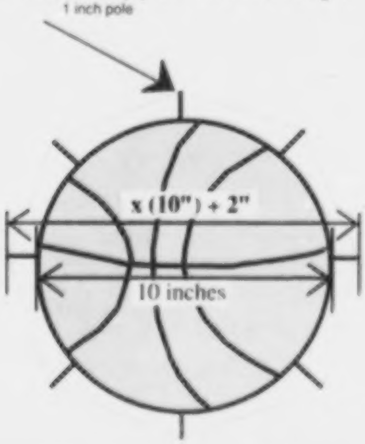
After you have wrapped the strings around the objects, above you realize that you have just made a big mistake:

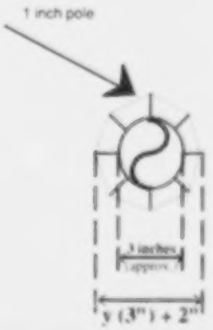
The string must not touch the ball !!

What you must do is to plant little poles all around the ball as seen in the diagram below, so that the string is always 1" above the surface of the ball.

You notice however that when you raise the string onto the poles that both strings are now too short. You realize that this is true because the circumference (the distance around the outer edge of the ball) has increased.

Your job is to add a piece of string to both of the existing strings to make them long enough so that they can again be wrapped all the way around each of the balls.





Name: **Date:**

Handout #1

An Exercise in Marginalism

The problem you face is that you are not sure if you have enough string for both. Your goal is to fix at least one. You are pretty sure that you have at least enough string to finish either the basketball or the baseball.

Given this predicament which of the following options do you consider to be the best solution:

a. Add your remaining string to the baseball first, then see what you have left over for the basketball.

b. Add your remaining string to the basketball first, then see what you have left over for the baseball.

c. Start with either one, because they both require the same length so it doesn't matter which one you fix first.

After you have made your selection, briefly explain your reasons for choosing the option you did:

Name: Date:

Handout #2

What's Wrong With This Way of Thinking?

Problem #1

I am just breaking even selling hamburgers at $.50 each. I was asked to cater a party which needed 1,000 additional hamburgers, but they only wanted to pay me a maximum of $.25 per hamburger. At my current level of hamburger production I figured that it would cost me an additional $200 to supply their order. But, if I took my total cost of all of the hamburgers I produce, divided by total number of hamburgers I make, it costs me .$50 on the average.

[redacted]

1. What's wrong with this way of thinking?

Problem #2

My airline is not in the business of giving away charity tickets. If it costs, on the average, $200 per seat to fly from Seattle to San Francisco, we can't stay in business by selling tickets on half-empty flights to tourists who refuse to pay more than $75 per ticket. **At that rate, we would be losing $125 per seat.**

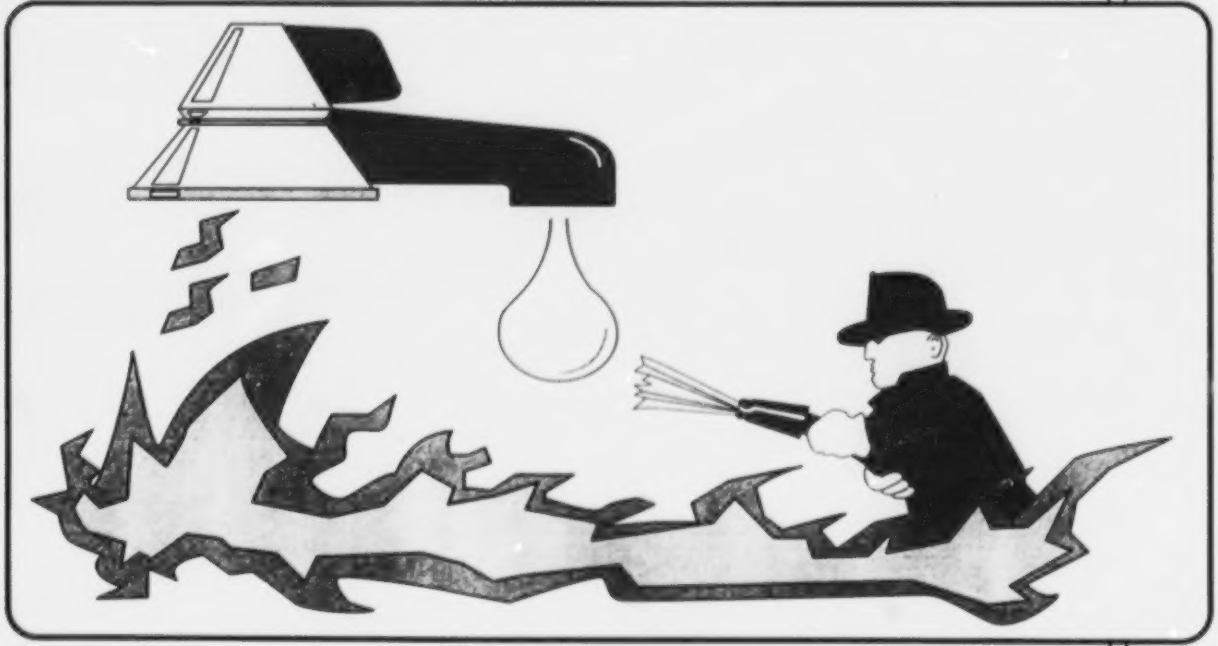
[redacted]

1. What's wrong with this way of thinking?

EST COPY AVAILABLE

CLASSROOM APPLICATIONS

WATER RIGHTS IN CALIFORNIA
A PROBLEM OF SCARCITY!



COULD IT BE THAT:
CALIFORNIA HAS PLENTY OF WATER?

WATER RIGHTS IN CALIFORNIA

COULD IT BE THAT:

CALIFORNIA HAS PLENTY OF WATER?

PRIMARY ECONOMIC CONCEPTS

- Scarcity
- Property Rights
- Price Supports

LEARNING OBJECTIVES

This module will enable students to:

- identify different types of property rights and the importance of those rights in allocating scarce resources.
- demonstrate a distinction between shortages and scarcity.
- identify the elements of tradition in our economy and the consequences of not using price to allocate scarce resources.

POTENTIAL LEARNING HURDLES

Price supports tend to be confusing when they are graphed because ceilings are drawn below the equilibrium price, and supports (or floors) are drawn above the equilibrium price. This confuses students who cannot understand why floors are positioned over ceilings. It is helpful to graph each separately on two different graphs.

For more on this learning hurdle see chapter 3, page 5.

BACKGROUND

The California water problem is serious and is likely to be in the news for some time to come. The problem is basically one of identifying conservation measures that will result in a more efficient use of the current water supply by decreasing the quantity demanded. Given the heavy subsidization of water for farm use and the fact that farmers use up to 85 percent of the West's water, the core of the problem is with agriculture.

If a shortage exists, the solution is simple. A shortage means simply that the quantity demanded exceeds the quantity supplied AT A PARTICULAR PRICE. The easiest solution is to raise the price and eliminate the shortage. A good is scarce if there is not enough available at a zero price to meet the demand. Thus, water and oil are scarce, but garbage and dirty air are not. The issue that this module addresses is whether the current method of allocating water in California is satisfactory.

OTHER ACTIVITIES

1. Assign the book, The Milagro Beanfield War, or show the movie (available on video) and discuss the property rights of the developers versus those of the townspeople. From a market perspective, what was happening to the land? Use a production possibilities curve to illustrate the concept of opportunity cost and discuss it in terms of efficient allocation of resources. Why might tradition overrule the efficiencies of the market? Use the story to explain the costs of reallocation of resources away from one activity (beans) to another (recreation). The story is one example of conflict of interests when the market reallocates resources.

2. Ask the students to consider the following situation. You are raising a crop that uses a tremendous amount of water. The government decides that it will no longer subsidize your water use, so the price of water goes up six fold. The government also stops subsidizing your crop, so the price you receive for your crop falls by about twenty percent. What are your options?

ANSWERS TO HANDOUTS

Answers to Handout #1

The answers to this can be quite varied. The goal is to see that a change in one market has impact in a variety of other markets.

ANSWERS TO HANDOUTS - CONTINUED

Answers to Handout #2

A shortage is a function of price. A shortage exists when the quantity people want and are able to purchase is greater than the quantity which is willing to be sold at a specified price. If the price of water were $1,000 per gallon, we would have a surplus of water, yet in either case the absolute amount of water in California would not change.

Answers to Handout #3

In most cases students should demonstrate a downward sloping demand curve. If there are students who exhibit no change in quantity demanded regardless of price, it is time to introduce to these students the concept of elasticity of demand. Explain that their demand for water is perfectly inelastic. You might compare all of the students numbers and derive a class demand for water.

Name: Date:

Handout #1

Water in the Wild, Wild West

Terms to know before you read :

Government Subsidy:	The amount of money the government pays to farmers to help support them.
Efficient Allocation of Resources:	Achieved when the market price of a good has resulted in no surpluses or shortages. The quantity demanded is equal to the quantity supplied.
Riparian Doctrine:	A doctrine of ownership where the user of a resource is also obligated to maintain and preserve that resource.
Prior Appropriation Doctrine:	A doctrine of ownership according to which if I own it I can do whatever I want with it.

It is said that California is running out of water. We are often told that there is a water shortage. To an economist, such statements are disturbing since they ignore the distinction between the fact that water is scarce and that a shortage only exists at a particular price. **The simple solution to a shortage is to raise the price.** As with most economic issues, this one lends itself to some further investigation.

If water is a renewable resource and if people are not getting enough of it, the quantity demanded must exceed the quantity supplied at the current price. The solution falls into one of three categories:

(1) raise the price
(2) increase the supply
(3) decrease the demand

To analyze the alternatives, consider that a market efficiently allocates products and resources as long as there is information and clearly defined property rights. The California water problem is an example of a property rights problem. There are basically two types of water rights in the U.S.. In the East, the **Riparian Doctrine** was used. This doctrine stated that all users of a waterway had a right to use it and an obligation to maintain and protect it; riparian rights encourage conservation. In the "Wild West", with the attitude of the Gold Rush miners, the **Prior Appropriations** argument was used. In this situation, much as when a gold miner laid stake to his find, the first user of the water had absolute rights to it; he or she could use all that was desired; prior appropriation rights discourage conservation. In addition, the federal government built dams to provide water for irrigated farming in the arid West. As a result, water was considered a "right" of property owners. **This traditional element of the market for water seriously clouds the issue since many feel that "free" or very low cost water is their right.** Suggestions to the contrary are met with violent opposition. Three events have changed the water situation in the U.S. today:

1. The federal government has basically given up the role of building dams; most dams that are going to be built have been built so that a significant increase in the supply of water is not likely.

Name: **Date:**

Handout #1 - continued

Water in the Wild, Wild West

2. Indian water rights are being invoked in courts, diminishing the amount of water available to farmers.
3. Environmental concerns are challenging the way in which water is being used. As a result of these three events, the amount of water available for farming is at best stable, and at worst, shrinking.

A further "traditional" element intrudes on the water question. There is very little incentive for farmers to conserve water through more efficient irrigation systems or by switching to less "thirsty" crops (as opposed to a crop like rice which demands an enormous amount of water). Farmers, **who currently use 85% of the West's water,** are actually encouraged by Federal water policy to irrigate their fields in a wasteful manner. Their water is heavily **subsidized** (this means that the federal and state governments give money to farmers for water, making the price they pay for water much lower than the price anyone else pays). Farmers actually pay 20 percent of the market value of water. The water subsidy programs provide incentives for farmers to flood their fields, losing up to 50 percent of the water to evaporation and raising water intensive crops that are already in surplus supply. These crops are often bought for storage by the federal government in order to keep the price of the product up.

In one sense, then, the price of water is too low. Now the solution becomes clear – raise the price. If the price of water to farmers were increased, the law of demand tells us that the quantity demanded would fall. Notice that the market price of water to homes may or may not be raised. The solution suggested is not actually an increase in price; it is the elimination of a subsidy that keeps the price to farmers below the market price. If the market is allowed to allocate, the shortage would be eliminated as farmers are provided with incentives to use more efficient forms of irrigation systems.

The effect of this, of course, is that the price of farm products would rise and that some crops currently being raised would no longer be raised. The tradition element of our economy works strongly against such changes.

A second solution, and one used by former governor Bruce Babbitt of Arizona, is to change the property rights system. Suppose you had an abundant supply of water on your land. Under this system you would be allowed to sell those rights. A market in water rights would develop and some farmers (those who had abundant water supplies on their land) would become quite wealthy.

A final solution is conservation through water planning groups that view the use of water from an overall perspective as opposed to the current individual policies. Advocates of this plan argue that such a broad view of water usage would protect society's interest in allocating scarce water resources to their highest valued uses.

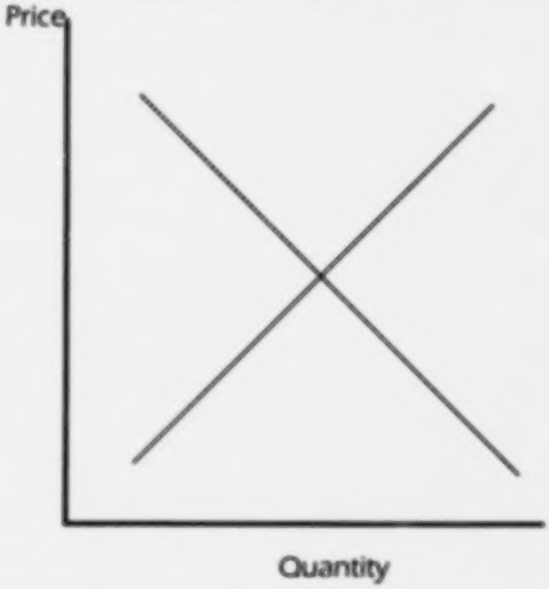
Name: ______________________ Date: ______________

Handout #1 - continued

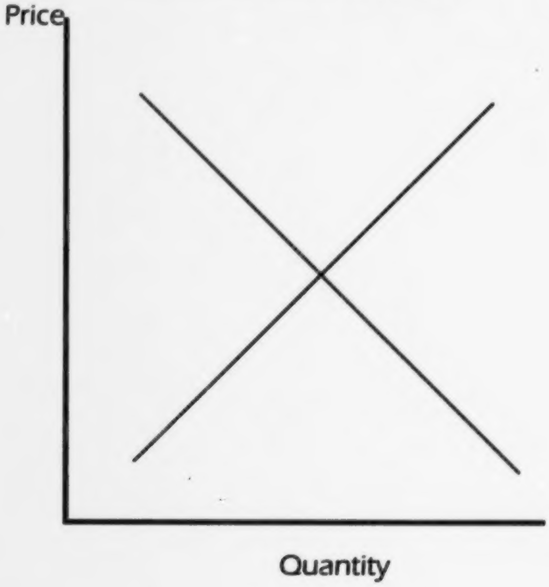
Water in the Wild, Wild West

There were three solutions to California's water problem suggested in the reading. Choose one of those solutions and use the graphs below to explain the economic impact of that choice. You do not need to use all of the graphs provided. Yet any of the solutions will affect more than one market. Make sure you identify which market is being affected.

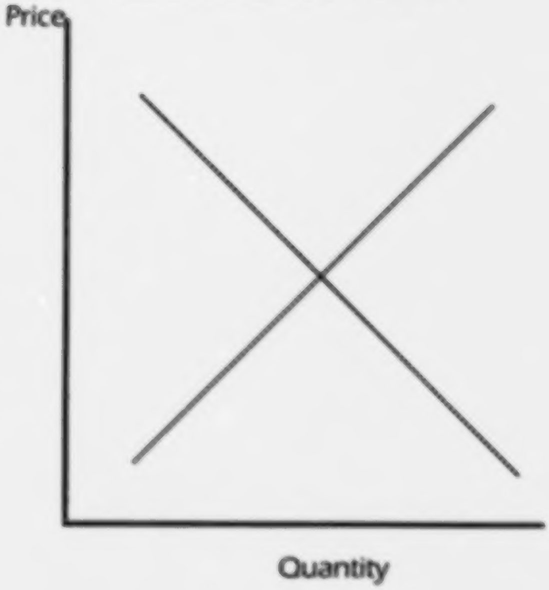
__________ Market


Price
Quantity

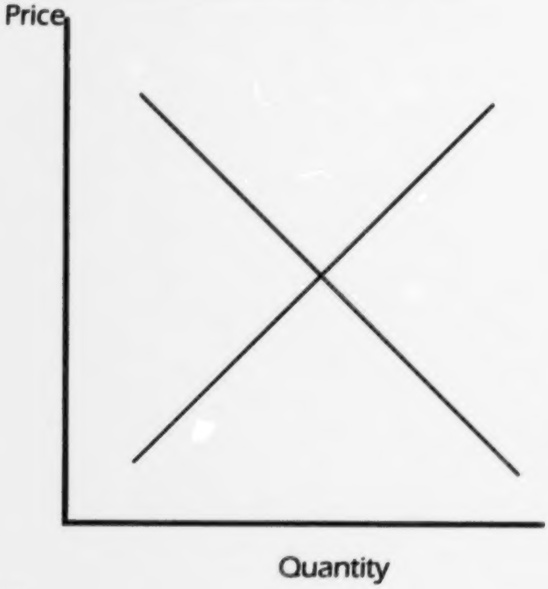
__________ Market


Price
Quantity

__________ Market


Price
Quantity

__________ Market


Price
Quantity

Name: **Date:**

Handout #2

What's Wrong With This Way of Thinking?

"We are running out of water.
There is a water shortage in California!"

Evaluate the error in that statement:

Name: Date:

Handout #3

Graphing A Demand Curve

Changes in Quantity Demanded

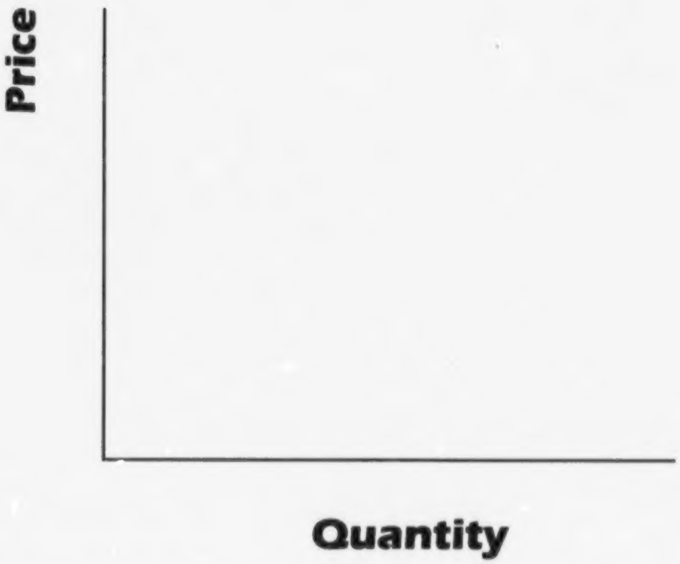
Graph the impact that an increase in the price of water has on the quantity demanded.

Record the following information for one week. Take a one gallon bucket and see how long it takes to fill it in your shower. (It is likely to take a few seconds.) Record the amount of time that you spend in the shower each week and calculate the amount of water used per week. Then complete the following questionnaire.

If I were paying for my water and:

If the price of water was:	**I would use:**
5¢ per gallon	_________ gallons per week
30¢ per gallon	_________ gallons per week
50¢ per gallon	_________ gallons per week
70¢ per gallon	_________ gallons per week
$1 per gallon	_________ gallons per week

Draw your demand for water on the graph below.
Is an increase in the price of water an effective way to reduce the quantity of water demanded?



ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

IMMIGRATION AND THE U.S. ECONOMY

COULD IT BE THAT:

ILLEGAL IMMIGRATION MAY BE GOOD FOR US?

IMMIGRATION AND THE U.S. ECONOMY

COULD IT BE THAT:

ILLEGAL IMMIGRATION MAY BE GOOD FOR US?

PRIMARY ECONOMIC CONCEPTS

- Comparative Economic Systems
- Production Possibilities Curves
- Supply and Demand

BACKGROUND

As the enclosed case study of Basque sheepherders and Mexican immigrants indicates, immigration is a natural response to economic incentives. Such voluntary exchange between buyers and sellers of labor is a positive sum game; that is, virtually everybody wins. Employers get more output per dollar spent on labor, and employees achieve a higher standard of living. Society benefits as well, in the form of a rightward shift in the production possibilities curve, reflecting increased productive capacity from the inflow of resources. An additional benefit results when immigrants are willing to engage in occupations that domestic workers tend to avoid. The willingness to work for relatively low wages is beneficial to consumers, because it holds down prices; but it is disadvantageous to domestic workers whose wages are restrained by the competition from a pool of cheap immigrant labor.

NOTE TO THE TEACHER

The Basque reading indicates ways in which economic theory specifically production possibilities and supply and demand analysis, can provide a framework for weighing the benefits and costs of immigration policies without the emotional appeals that typically prevent rational analysis.

The reading also shows the mixed effects of market forces and tradition in resource allocation, in this case, occupational choice and geographic mobility. Clearly, people respond to economic incentives, and yet the Basque era in the American West reflected a largely tradition-based economy.

ACTIVITIES:

1. Hand out or summarize the case study for discussion by your students. Ask the class to explain the rise and fall of the Basque sheepherder in the American West.
2. As a homework assignment, have your students interview family members or family friends regarding their opinions on restrictive immigration laws. As part of the assignment, the students should analyze the motives of the interviewees: to what extent are their opinions colored by the effects of immigration on their individual circumstances?
3. As a followup classroom discussion, ask students to identify winners and losers from open immigration policies. Encourage them to use supply and demand analysis and production possibilities curves to support their conclusions.
4. Using the Basque reading as a focus, lead a discussion of the role of tradition in the sheepherder's life and compare the Basques with our society as a whole. Ask for examples of tradition, market, and command elements in the U.S. economy.

DISCUSSION QUESTIONS

1. What effect does immigration have on the production possibilities curve? How does this relate to the notion of a "brain drain" from Third World countries when their college graduates leave for higher incomes in the U.S.?
2. Can any society have a purely market, command, or traditional economy? Why or why not?

Name: **Date:**

Handout #1

A Case Study in Immigration: Basque Sheepherders in the American West

From the 1850s through the early 1970s, sheepherders from the Basque regions of Spain and France were a fixture in the American West. The institution began in the mid-nineteenth century, when Basque gold miners began to leave the mines to tend sheep. Throughout the late nineteenth and early twentieth centuries, Basques expanded throughout the West, displacing the Spanish Dons, who held the original land grants from the Spanish crown. Sheep proved to be better suited to the arid American West than were cattle. Although they required constant supervision, sheep required less labor, because of their natural tendency to flock. One herder living with the sheep could manage perhaps 1,000 sheep. The Basques were willing to endure the loneliness and low pay involved in herding sheep; in fact, the menial wages in the United States were far superior to those available to sheepherders in Europe.

By the 1920s, a glut of Basques led to unemployment and reduced economic opportunities for herders. The decade was characterized by restrictive immigration policies; in 1924, for example, legislation limited immigration of Spanish nationals to 131 per year.

General labor shortages in the 1940s combined with attrition of Basque sheepherders, led to a serious labor crisis. Ranchers lobbied against the restrictive quotas and for exemption of Basques, resulting in a piecemeal solution in the form of a series of "private laws" legalizing individuals who had jumped ship and made their way to the sheep herds. The 1940s were critical for the industry. The number of breeding ewes declined by 40 percent, and sheep owners began to organize for the sole purpose of implementing sheepherder importation programs. One result was the establishment of the California Range Association, which later evolved into a national organization, the Western Range Association (WRA).

By the 1960s, an agreement was reached to allow each herder a three-year visa, good only for sheepherding. The herder could reapply only after leaving the country, thus precluding a five-year continuous residency that would qualify him for permanent residency and freedom to change occupations.

Although herders' salaries were low, they were high enough by Basque standards to permit a herder to save enough during his three years to buy a small farm in Spain. Thus, menial labor in U.S. was a source of upward mobility in Spain.

By 1970, the wage gap between the American and Spanish economies that caused this arrangement had virtually disappeared. Herders in Spain earned roughly as much as herders in the U.S., and the Basque region had become highly industrialized. As a result, the WRA began to recruit herders from Mexico and Peru. Still, labor shortages, poor markets for wool and lamb, restrictions on poisoning predators, and environmental concerns, combined to cause a serious decline in the industry in the 1970s. Between 1970 and 1976, the number of WRA herders declined from 1,500 to 742 herders, and the percentage who were Basque declined from 90 to 14 percent. The Basque sheepherder era in the West is over.

Name: **Date:**

Handout #1

What's Wrong With This Way of Thinking?

"We need to close the borders—we just can't continue to let in foreign workers who take jobs away from American workers and drain our tax dollars."

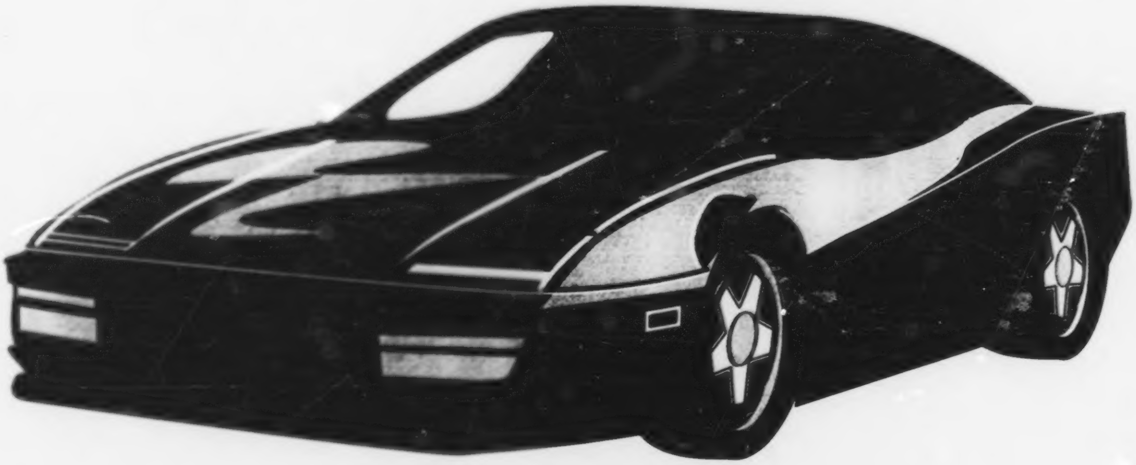
What are the errors in this way of thinking?

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

PROPOSITION 103

APPLYING SUPPLY AND DEMAND



COULD IT BE THAT:

WE ARE BETTER OFF WITH HIGHER INSURANCE RATES?

Proposition 103

APPLYING SUPPLY AND DEMAND

COULD IT BE THAT:

LOWER INSURANCE RATES DON'T ALWAYS MAKE US BETTER OFF?

PRIMARY ECONOMIC CONCEPTS

- The Supply Curve
- The Demand Curve

LEARNING OBJECTIVES

This module will enable students to:

- use supply and demand to predict the possible effects of Proposition 103 on insurance rates.
- differentiate between a change in demand and a change in the quantity demanded.
- differentiate between a change in supply and a change in the quantity supplied.

POTENTIAL LEARNING HURDLES

A common error is the tendency to use the word demand to mean quantity demanded, e.g., "Demand increased when the price fell." Students and their teachers must be able to distinguish between the two distinct concepts.

Specific information on helping students overcome this learning hurdle can be found on page 3 of the Learning Hurdle Chapter.

BACKGROUND

In November 1988, California's voters approved Proposition 103, an insurance rate rollback of 20% from the November 1987 levels. Proposition 103 also eliminated the insurance industry's antitrust law exemption. Supporters argue that the industry was an inefficient cartel that had been protected from competition by archaic state laws and collusive behavior in setting rates that did not reflect actual claims experience. Critics argue that the 20% rate cut is an arbitrary "meat axe" approach to pricing that will drive companies out of business and eventually lead to higher rates and a massive government bureaucracy replacing the efficiency of the market place.

NOTES TO THE TEACHER

Intended to follow an introductory lesson on supply and demand, this module explores the possible effects of the insurance rollbacks on the markets for high performance and standard automobiles. Because people respond to economic incentives, we can predict with reasonable certainty a decline in insurers' willingness to insure high performance cars and high risk drivers following the 20% rate rollback. Automobiles and insurance are complementary goods; therefore, decreased availability of insurance will decrease the demand for high performance automobiles, particularly by teenagers, who are labeled high risk drivers. To the extent that teenagers find it harder to get insurance after Proposition 103, we would expect to see a decline in the demand for such cars, as drivers substitute safer, but less exciting cars for their more exotic brethren. Supply, however, would not shift (at least in the short run), although the quantity supplied and price would decline as sales fall and manufacturers shift production to automobiles without adverse insurance ratings.

As a result of this application of supply and demand, students will be able to evaluate the positive and negative effects of Proposition 103 and explain the impact of a change in the price or availability of a good upon the demand for a complementary good.

ACTIVITIES

1. Handout #1 has students attempt to identify the probable effect on the demand for RX-7s (soon to be replaced by some other high performance car) as a result of Proposition 103. Before giving the handout to the students, use Overhead Transparency #1 - Shifting Supply and Demand and demonstrate for students how a shift in a curve results in a change in the quantity of the other. Practice this with them several times

until they have the concept mastered.

2. Divide the class into the following special interest groups: (1) insurance companies, (2) teenage drivers, (3) middle-aged drivers with perfect driving records, and (4) the California Supreme Court. Each special interest group has five minutes to make a statement on Proposition 103 to the Supreme Court. The Court will hear the arguments and give a ruling. In discussing the outcome, point out the fact that every policy will have winners and losers and there will always be conflict between goals such as efficiency and equity.

3. Using Overhead Transparency #2 - The Supply Curve explain to students the law of supply, noting that supply is a willingness to sell. The common misconception is that supply represents stocks or inventories, rather than sellers' desires. Illustrate the difference between supply and stocks. Explain that sellers respond to higher price by providing more for sale (an increase in the quantity supplied).

   After they have gained some level of proficiency with that topic, have students complete Handout # 2.

4. If the class is still unclear on the concept of demand, survey the students to find out how many cans of soft drinks they would purchase for consumption in class at various prices. Plot the class demand curve for soft drinks. Be sure to count the number of cans, rather than the number of students who would buy at various prices. Plot the results graphically and explain the law of demand. Stress that demand is both the willingness and ability to buy at various prices. Pass out free potato chips and redo the demand curve to determine if the demand has increased. Ask the students to explain what has happened.

ANSWERS TO HANDOUTS

Answers to Handout #1

The probable results will be a decline in demand for RX-7s. This will put a decreasing pressure on price, and that will result in a decrease in the quantity supplied.

1. decrease/demand
2. decrease/quantity supplied
3. decrease in price because insurance and cars are complementary goods.

Answers to Handout #2

1. False. The law of supply states that at a lower price a lower quantity will be supplied. If the statement were true, the supply curve would be vertical (perfectly inelastic) which means that given any change in price the quantity supplied would remain the same.

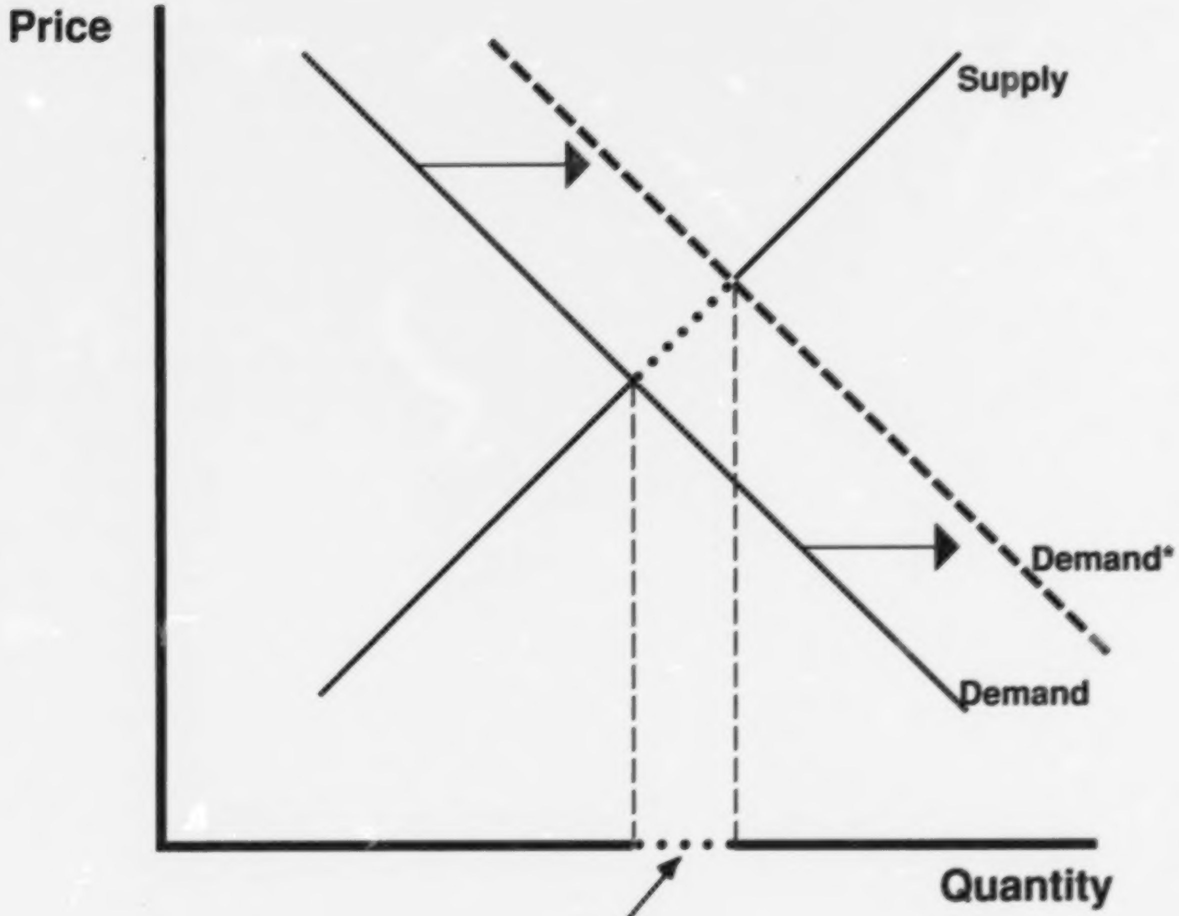
Answers to Handout #3

1. This is not true. Again the common misconception is that supply represents stocks or inventories of a good. Supply represents a willingness to sell. If the supply of petroleum is fixed, this just means that at any given price, the willingness to sell does not change.

2. False. If the only thing that changes is the price of a good, the result is a change in the quantity demanded, not a change in demand. A change in demand results in a shifting of the entire demand curve. A change in the quantity demanded results in moving from one point to another point on an existing demand curve.

Overhead Transparency #1

Shifting Curves

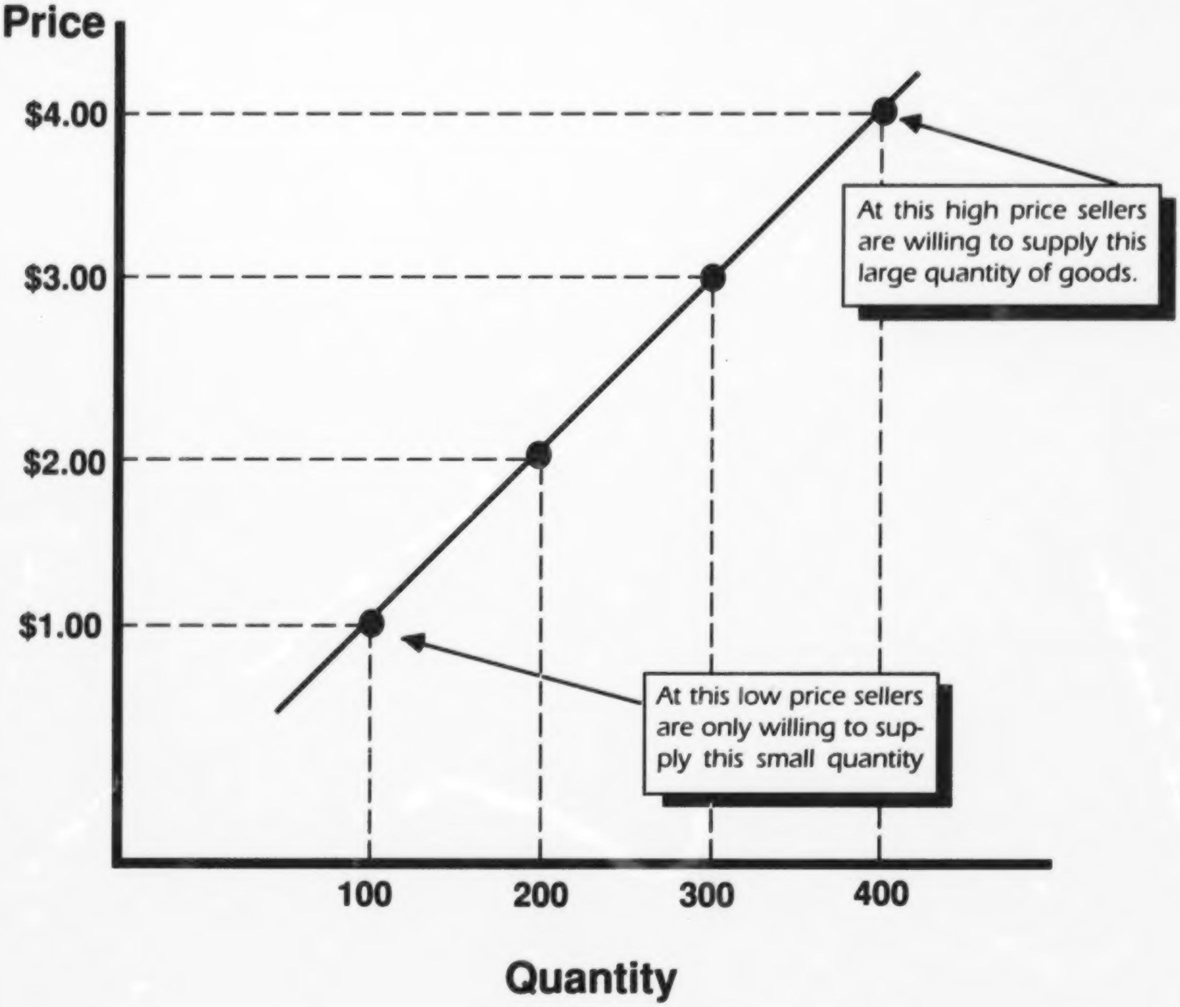


This area is the change in the **quantity supplied** because of the increase in price. The increase in price resulted from an increase in **demand.**

Overhead Transparency #2

The Supply Curve

This curve shows what sellers are willing to offer for sale at various prices. This curve does not show how much of a good will actually be produced.



At this high price sellers are willing to supply this large quantity of goods.

At this low price sellers are only willing to supply this small quantity

Conclusion:

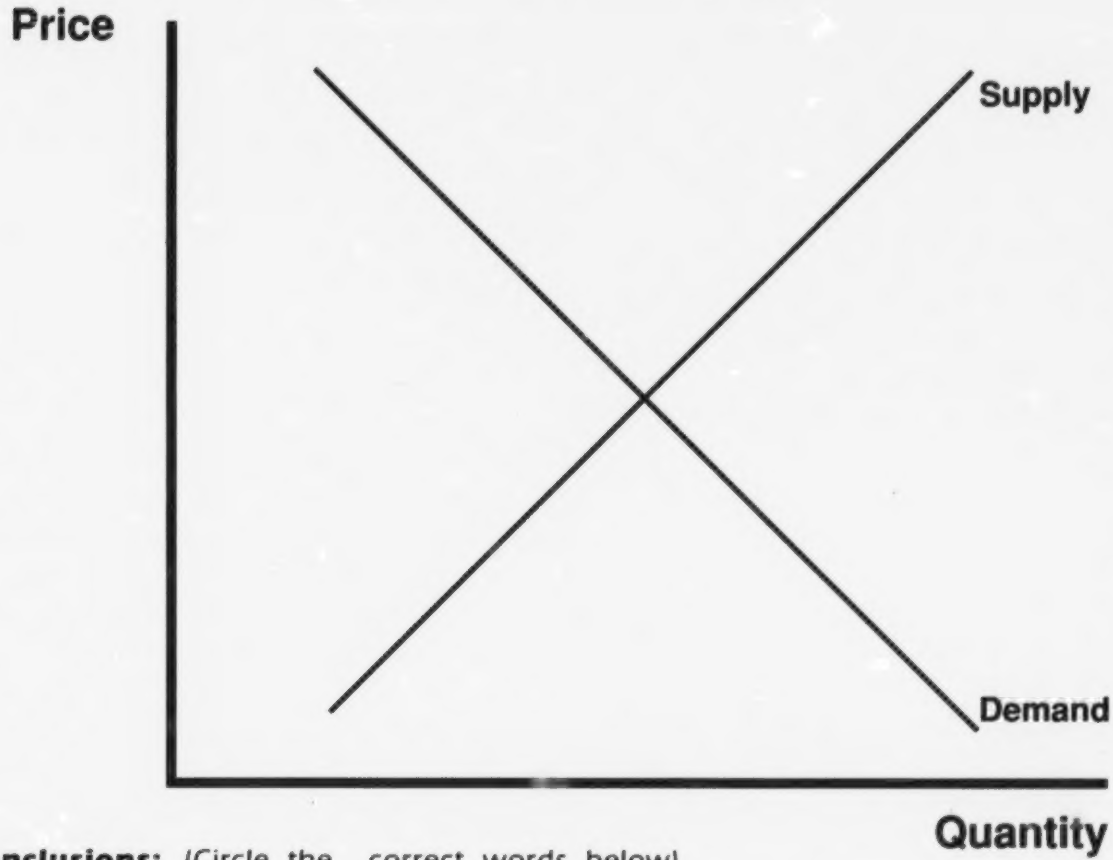
This curve does not show what has been produced. It merely reflects the fact that sellers have a greater **DESIRE** to offer more goods for sale when the price is higher.

Name: **Date:**

Handout #1

Understanding Demand

Identify the probable effect on the **DEMAND** for RX-7s as a result of Proposition 103, if insurance companies tighten up their standards for insuring high risk cars and drivers. **Draw in what you believe will be the new demand curve and show the new equilibrium price and quantity as a result of Prop. 103.**



Conclusions: (Circle the correct words below)

1. There will probably be an **(increase / decrease)** in the **(demand / supply)** for RX-7s.
2. There will probably be an **(increase / decrease)** in the quantity of RX-7s **(demanded / supplied)**.
3. There will probably be an **(increase / decrease)** in the price of RX-7s.

Name: **Date:**

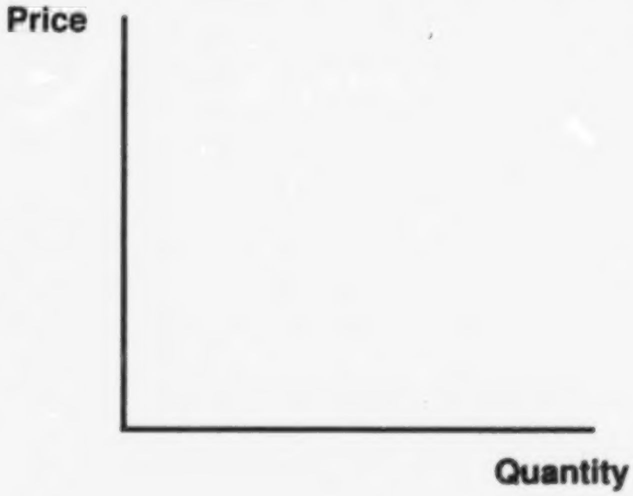
Handout #2

Understanding Supply

1. Using your own opinion, evaluate the statement below. Decide whether it is true or false, and briefly explain your reasoning:

> **"Insurance companies are bluffing when they say that they will cut back on underwriting insurance policies if we cut their rates by 20%. They would never give up a $30 billion insurance market"**

2. With your new understanding of a supply curve, show on the graph below what the shape of the supply curve would look like if the quotation above were true.



3. Explain briefly why you drew the curve the way you did.

Name: Date:

Handout #3

What's Wrong With This Way of Thinking?

Problem #1

"The supply of petroleum is fixed (a vertical supply curve), because there is only a finite amount of it in the ground."

1. What's wrong with this way of thinking?

Problem #2

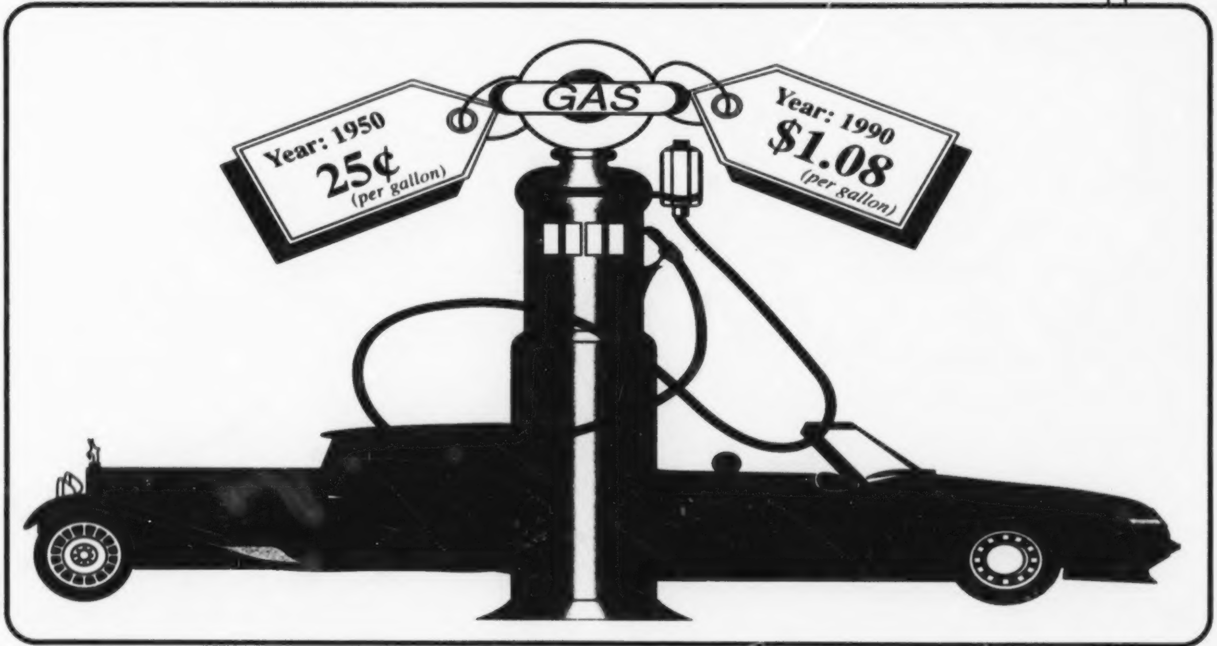
[illegible]

1. What's wrong with this way of thinking?

BEST COPY AVAILABLE

CLASSROOM APPLICATIONS

RELATIVE VS. ABSOLUTE PRICES


GAS
Year: 1950
25¢
(per gallon)
Year: 1990
$1.08
(per gallon)

COULD IT BE THAT:

THE PRICE OF GASOLINE HAS ACTUALLY DROPPED SINCE 1950?

RELATIVE VS. ABSOLUTE PRICES

COULD IT BE THAT

THE PRICE OF GASOLINE IS ACTUALLY LOWER THAN IT WAS IN 1950?

PRIMARY ECONOMIC CONCEPTS

- Relative and Absolute Prices
- The Law of Demand
- Price Indexes
- Income and Substitution Effects

LEARNING OBJECTIVES

This module will enable students to:

- utilize price indexes to determine the difference between real versus nominal prices.
- explain the economic concepts of income and substitution effect from a relative perspective.
- explain the short term and long term adjustments to changing relative prices.

BACKGROUND

At over $1.00 per gallon today, the price of gasoline certainly exceeds the 20¢ price that existed in 1950. However, the increase in gasoline prices over the past 40 years has been proportionately much less than the corresponding increase in incomes and other consumer prices. The real price of gasoline relative to all items in the consumer price index actually fell by roughly 10 percent between 1950 and 1990. Even students working at the federal minimum wage of $4.35 per hour would be far better off today at the gasoline pumps than their counterparts would have been 40 years ago at the then-current 25¢ per hour minimum wage. It would have required nearly an hour's work in 1950 for such a student to buy a gallon of gas; in 1990, the same hour's work would have bought nearly four gallons.

NOTES TO THE TEACHER

Students often confuse relative and absolute prices. This exercise can help to clarify the distinction and demonstrate that over time, it is relative prices that determine the demand for goods and services. This is also a good opportunity to introduce price indexes and the distinction between nominal and real income. Students should be able to calculate real income by multiplying nominal income by the ratio of two price indexes. For excellent classroom activities, see the Teaching Strategies: High School Economics Courses, Lesson #15, or Capstone: The Nation's High School Economics Course listed under "Additional References." These activities will help to link microeconomics with macroeconomics.

ACTIVITIES

1. Use Handout #1 and Transparency Master #1 to derive your students' demand schedule for gasoline by asking them how much they would purchase per week at various prices ranging from $1.00 to $5.00.

   .Ask your students to explain why the quantity demanded falls as the price increases from $1.00 to $5.00. If they identify affordability and availability of alternatives to driving, tell them that economists refer to these factors as INCOME and SUBSTITUTION effects.

   Whenever the price of a product decreases, two things happen to cause the amount demanded to increase.

   a. INCOME EFFECT. If the price of product like gasoline falls, the real INCOME or purchasing power of anyone buying that product increases. This increase in income will then be reflected in an increase in purchases of a variety of products, including more gasoline.

      Simply stated, if the price of gasoline goes down, I now have more INCOME left over to buy other things, including more gasoline.

   b. SUBSTITUTION EFFECT. A lower price of a product means that this product is now cheaper relative to all other products. Consumers will tend to SUBSTITUTE the cheaper products. Gasoline at $1.00 per gallon will be much more attractive to consumers than at $5.00 per gallon. Thus as the price of a product falls consumers will adjust their buying practices to substitute more of the now relatively cheaper good.

2. Lead a discussion of the ways in which students could economize on the use of gasoline in response to a sharp price hike.

3. Next ask your students to identify any changes in the quantity of gasoline purchased if the price doubles from $1.00 to $2.00 at the same time that all other prices double, (including the price of their services, the wage rate). Discuss their responses in light of the fact that in relative terms, nothing has changed to cause a change in gasoline purchases.

4. As a homework exercise, ask your students to determine whether or not their families' real incomes have risen or fallen during their lifetimes. They should compare the percentage change in the consumer price index with the percentage change in family income during the period. For sources of price data, suggest that they look at federal publications such as the Statistical Abstract of the United States, or most college level introductory textbooks.

ANSWERS TO HANDOUTS

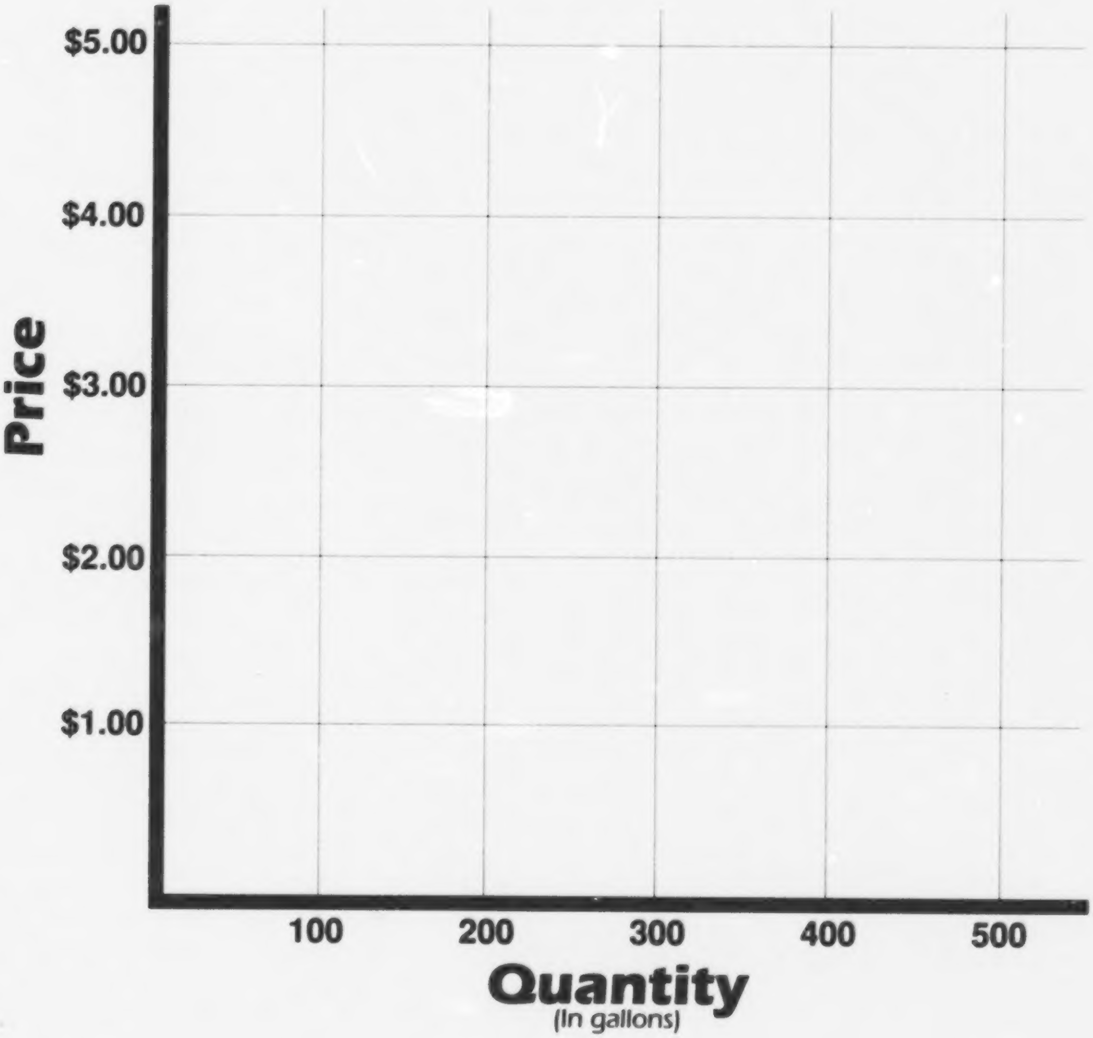
Answers to Handout #2

No, the law of demand has not been refuted here. The common misconception is that students fail to consider the absolute vs. relative effects of income and prices. People's decision to purchase more gas-inefficient cars is quite rational. While it is true that the price of gasoline has continued to rise more often than it has fallen, this fails to take into account that the general level of wages during that same period of time has increased at even a faster rate. RELATIVELY SPEAKING, THE REAL PRICE OF GASOLINE HAS FALLEN AT $1.00 PER GALLON.

Overhead Transparency #1

GRAPHING A
DEMAND FOR GASOLINE

Chart on this graph the total class demand for gasoline



Name: Date:

Handout #1

Deriving Your Demand For Gasoline

Demand from an economic perspective can be defined as your willingness to buy a good backed up by your ability to pay. Gasoline is a good that, as seniors in high school, most of you are both willing and able to purchase. Therefore, it can be said you have a **DEMAND** for gasoline. Fill in the chart below to trace that demand out a little more carefully.

I. Establishing a Benchmark

1. What is the average price you pay for gasoline: ____________________

2. How many gallons of gasoline do you normally purchase in one week:

II. Deriving a Demand

Suppose the price of gasoline were as follows. Try to estimate the amount by which you would adjust your purchases:

Price	Quantity of Gallons Purchased in One Week
$1.00	
$2.00	
$3.00	
$4.00	
$5.00	

Name: Date:

Handout #2

Think About It - Write About It

During the 1970s, when the price of gasoline skyrocketed, people began to adjust to the price changes by purchasing smaller cars, more sailboats as opposed to motorboats, more bicycles, etc. Yet now it seems as though consumers are once again returning to bigger cars and power boats. When it comes to cars, our first question is again horsepower and not gas mileage.

This is somewhat puzzling given the fact that since 1970, the price of gas has continued to rise much more often than it has fallen. This seems contrary to the Law of Demand. This law states that as the price of a good goes up, people purchase a smaller quantity of it.

If this law is true, then we would expect people to continue to buy gas-saving cars. Is the Law of Demand incorrect or are there other factors that should be considered?

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

THE ECONOMICS OF ENVIRONMENTAL PROTECTION

COULD IT BE THAT:

YOU CAN HAVE TOO MUCH OF A GOOD THING?

THE ECONOMICS OF ENVIRONMENTAL PROTECTION

COULD IT BE THAT:

YOU CAN HAVE TOO MUCH OF A GOOD THING?

PRIMARY ECONOMIC CONCEPTS

- Scarcity
- Opportunity Costs
- Marginalism

LEARNING OBJECTIVES

This module will enable students to:

- analyze the opportunity costs involved in making government spending decisions.
- explain how the concepts of scarcity and marginalism relate to the topic of environmental protection.

BACKGROUND

The oil spill by the Exxon Valdez affected roughly 1400 miles of Alaskan shoreline. Evidence suggests that in spite of human error on the tanker, the spill might have been avoided if the Coast Guard had not cut costs four years ago by reducing staffing and using a cheaper, less sophisticated radar system to monitor shipping near the Alaskan port of Valdez. News reports suggest that these cost reduction measures were enacted to free resources for the war on illegal drugs. More sophisticated radar could have sounded an automatic warning to the crew of the Valdez as it strayed from its shipping lane, thereby avoiding the accident.

According to Newsweek magazine, Exxon's profits will not be affected noticeably by the incident. Not only will insurance cover up to $500 million in liability claims, but even if the excess liability hits $1 billion, this will amount to only a small share of Exxon's 1989 profits, which are projected to hit $90 billion.

NOTES TO THE TEACHER

Environmental protection is an excellent way to illustrate marginalism and the economic way of thinking, because no matter how much we want clean air and water, and no matter how much we want plentiful (and cheap) energy, there is some point at which having more costs more than it is worth to us. This is another way of looking at the basic message of economics–we cannot have everything that we want.

The introductory "teaser" is deliberately ambiguous. It has a double meaning that should provoke student discussion. Some will argue that it means that the additional oil from offshore drilling may not be worth the social cost, including risk of environmental damage; whereas others will argue that it means that at some point, additional environmental cleanup costs more than it is worth in terms of economic growth and material standard of living. Ironically, it is appropriate to use the statement in both ways.

Probably the toughest change in thought process for our students (and ourselves) is to look at problems at the margin, that is, considering the additional benefits and costs of having a little more of the things that we want and stopping when the additional, or marginal, benefit of the last unit is just equal to the cost. When applied to environmental cleanup, this means eliminating pollution up to the point at which the last dollar spent on cleanup yields one dollar in social benefits. This does not mean that we are selling out on environmental protection; it simply acknowledges the existence of scarcity. We want a clean environment but not to the extent that the last dollars spent yield less than a dollar each in social benefits. Because we have limited resources and essentially unlimited wants, the dismal message of economics is that we must choose between goals, when in fact, we would like to have it all. The upbeat message is that marginalist thinking can ensure that we make the choices that give us the greatest social benefits and standard of living from our scarce resources.

By identifying opportunity costs, economics can put price tags on our social and individual choices; however, it cannot make the choices for us. Students need to realize that economics provides a framework for decision making, but the students must provide their own criteria and priorities in order to make their own choices. One can make an analogy between economic analysis and computers; both provide tools that can increase efficiency, although neither can provide answers without some input from the operator. The adage "garbage in, garbage out" applies equally well to computers and economic analysis.

ACTIVITIES

1. Role playing. Divide the class into the following groups: (a) oil company stockholders; (b) consumers of oil products; (c) Alaskan fishermen; (c) consumers of seafood; (d) previously unemployed Alaskans working on the cleanup effort at $16.69 per hour; (e) Coast Guard officials who diverted funding to drug interdiction in Florida; and (f) tourists and members of the Sierra Club. As a homework assignment, have each group research the impact of the Alaskan oil spill and prepare and present a position paper during a class discussion. Students who are not assigned to one of the special interest groups can serve as a panel of judges who will hear each group's arguments and assign liability for the spill.

   The teacher must guide the role play to see that the discussion does not deteriorate into an argument on who is most morally deserving and miss the real issue where students are looking at the marginal, or additional, benefits we are going to be receiving versus the additional amount of cost we must pay.

   An excellent primer on this concept can also be found in the Joint Council's Teaching Strategies: High School Economics Courses Activity #13.

2. Conduct a classroom discussion on the relative risks involved with the production and consumption of alternative sources of energy, such as nuclear, coal, gas, petroleum, solar, and wind power. Pose the question of whether or not any energy source can be truly risk-free.

DISCUSSION QUESTIONS

1. What are some of the tradeoffs involved in cleaning up the environment? In general, how should we make such decisions as how well do we clean up our environment?

2. How do we put a price tag on the wildlife damaged or killed by an oil spill? Do otters count? How much are they worth? Would they be worth more if we needed their pelts?

ANSWERS TO HANDOUTS

Answers to Handout #1

The law of scarcity forces us to make decisions as to how we best utilize our scarce resources and each time a decision is made we inevitably incur an oppportunity cost. This applies directly to the problem of environmental protection. While we, as individuals, a nation, or even as a planet, can all do "more" to clean up the environment, the question is: "How much more?" The economist will answer that question by saying that we will clean until the costs of more cleaning are greater than the benefits we are receiving.

It is very similar to the question: How clean do we keep our house?

Name: **Date:**

Handout #1

What's Wrong With This Way of Thinking?

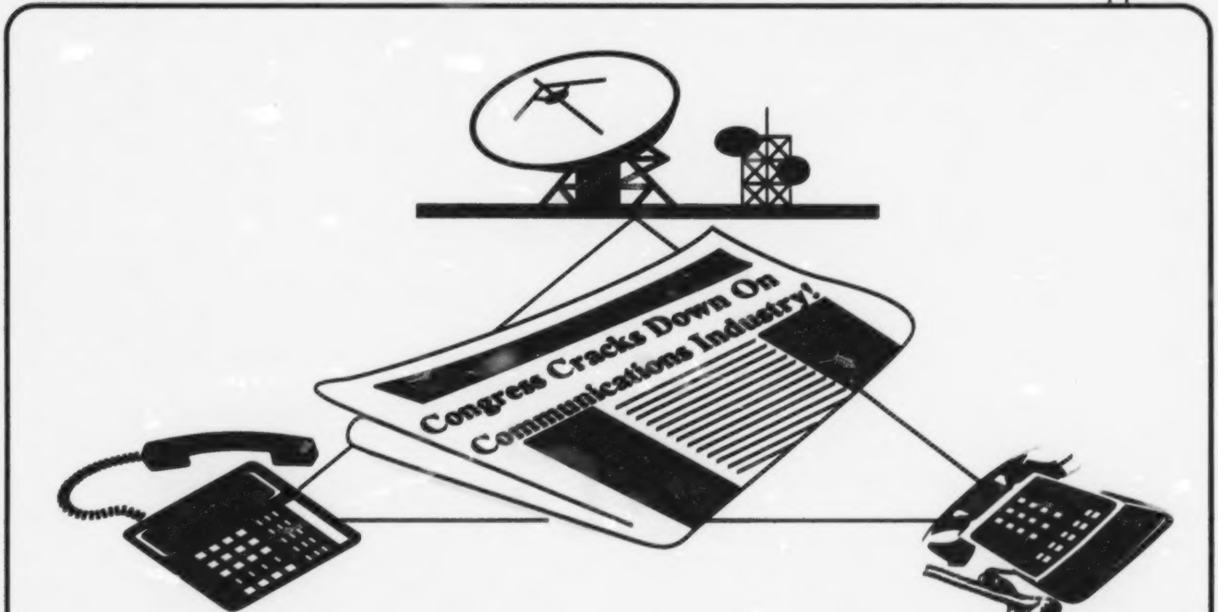
"We are destroying this planet with pollution, and waste. We should ban all environmental damage and tighten enforcement until the toughest standards are met."

What's wrong with this way of thinking?

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

MONOPOLIES & ANTITRUST LEGISLATION


Congress Cracks Down On Communications Industry!

COULD IT BE THAT:

MORE COMPETITORS MAY NOT MEAN MORE COMPETITION?

Module # 7

MONOPOLIES AND ANTITRUST LEGISLATION

COULD IT BE THAT:

MORE COMPETITORS MAY NOT MEAN MORE COMPETITION?

PRIMARY ECONOMIC CONCEPTS

- Monopolies
- Market Structures
- Antitrust and Patent Legislation

LEARNING OBJECTIVES

This module will enable students to:

- identify the characteristics of a monopolistic market structure.
- show through examples that monopolies are not always bad.
- define and cite examples of patents and copyrights as examples of government-protected monopolies.

BACKGROUND

The Supreme Court agreed May 1, 1989, to rule on the proposed merger of the business operations of Detroit's two daily newspapers, the Detroit Free Press and the Detroit News. Normally prohibited under antitrust laws, such mergers by newspapers are specifically permitted by the Newspaper Preservation Act of 1970.

Although the two newspapers would maintain separate news and editorial staffs under the proposed merger, they would consolidate circulation, advertising, printing, and various administrative functions under one corporate structure. Industry analysts project that without the bitter competition that has held down the prices of advertising and subscriptions in recent years, the two companies should be able to divide up profits of $100 million/year within the next five years.

PATENT LAWS

"To promote the Progress of Science and useful Arts, by securing for limited times to Authors and Inventors the exclusive right to their respective Writings and Discoveries..." Article 1, Section 8, U.S. Constitution

1. Patents in America, akin to monopoly grants to a favored firm of the crown, formally establish government-protected monopolies for their holders. Since the Patent Act of 1790, the U.S. Patent Office has continued to offer inventors a deal: for disclosure of significant contributions to the arts and sciences, the inventor receives exclusive rights to make products based on the invention for 17 years. More than a century before the first antitrust law was passed, the rights of inventors to monopolize products for short periods encouraged firms to set prices significantly above their production costs.

    a) Monopoly through patent became a constitutional principle. Competition grew in prominence as national policy through case and ultimately statutory law.

    b) Patents, licenses, copyrights, and trademarks restrict competition. However, without these barriers to entry into the intellectual property of their owners, significant inventions may not have occurred.

2. Most patents are not found to be valid when challenged in court. Trade Secrets have grown as a more secure way to hold monopoly power by avoiding legal attacks on the "originality" of the invention or lack of complete disclosure in its operation. Notable patent flops include the Selden patent on the automobile, which the court found not to be Mr. Selden's exclusive idea after Henry Ford's attorneys scrutinized it. Hits include the processing of alumina into aluminum, patented by Hall and Bradley in the 19th Century and held by the Aluminum company of America exclusively until WWII.

THE SHERMAN ANTITRUST ACT OF 1890

1. The Sherman Antitrust Act of 1890 is silent on competition. It takes case law doctrines of restraint of trade and monopolization and makes unreasonable exercise of these activities illegal in interstate commerce. The other antitrust laws, Clayton and Federal Trade Commission Acts of 1914, make unreasonable limits on competition illegal. Recently, Atari asserted that Nintendo violated the Sherman Act by patenting a computer chip for Nintendo game machines that rejects game cartridges made by competitors.

2. Video game hardware lends itself to economies of scale since game development and advertising are the core cost components. By applying stringent licensing requirements on its game producers, a few firms receive large rewards while most firms receive nothing.

   Note: Excerpts concerning the Nintendo™ and Atari Games™ suit and countersuit show the conflict between public policies to maintain competition and policies to offer monopoly protection. As of this writing, Nintendo's patent rights on locking out unlicensed games from its hardware have been upheld and Nintendo is suing retailers and wholesalers who market unlicensed (mostly Atari) games. Show students the extent of government protection of inventions and original contributions from section III of the databank.

   Students will see that public policies must trade off the property rights of inventors, authors, and creators of original works with the public need to maintain markets that are as competitive as possible. Protection of property rights is constitutionally protected and came first in the history of the United States. The same government also has the statutory mandate to preserve competition, which is the market parallel of democratic decision making. In the Nintendo case, game players can expect to pay higher prices for patented cartridges than if Atari prevailed. Current policy from this case shows the judicial branch choosing monopoly over competition. Although Nintendo has a monopoly on its system, it does not have a monopoly on even more sophisticated video games. Monopoly, whether it be video games or telephones, remains constrained by potential entry of inventors and manufacturers of systems that do the same or similar jobs in a different manner. Students will most likely be able to explain the high-tech options to Nintendo eloquently.

NOTES TO THE TEACHER

1. Like most of us, students are looking for easy answers. They often fail to realize that when we attempt to satisfy various conflicting goals, something has to give. In the case of antitrust exemptions, there is a trade-off between the efficiency of economies of scale and the efficiency that competition promotes. Freedom of the press surely suffers when the many voices of individual firms endure forced mergers of convenience to survive as a single-voiced speaker. Divergent views converge with the editorial policies of one management.

   a) Local papers need a minimum circulation to operate efficiently; without minimum efficient production size, the paper's costs will exceed its revenues. Local papers may be like local telephone companies: having two sets of deliveries over a wide territory is similar to having two sets of telephone wires run into every neighborhood.

   b) Another way of looking at the trade-off is short-run vs. long-run. In the short run, cut-throat competition can be great for the consumer; but in the longer term, the result is monopoly and higher prices. Antitrust policies continue to set higher burdens of proof for the prosecutors in demonstrating that reductions in numbers of firms may be anticompetitive. Administrative merger guidelines, promulgated in 1984 by the Justice Department, set in motion requirements that potential increases in competition be considered when actual competition decreases through merger. See Edward A. Snyder, "New Insights into the Decline of Antitrust Enforcement," Contemporary Policy Issues, v.VII No. 4, October 1989. Thus, the combination of economies of scale and future competition through entry into the industry have sanctioned monopolized newspaper markets if not media markets.

2. Ask students to form three or four media teams in a hypothetical metropolitan market. Take insurance

reform and establish affirmative editorial positions for each ballot initiative at different news companies. Each team can state in a minute on an audio cassette its reasons for supporting its specific proposition.

Then the teacher plays the role of a takeover magnate and merges television and newspaper teams. While not dictating, the teacher offers treats or extra credit to people who are willing to adopt "correct" positions on insurance reform. Contrast the latest editorial stand with each of the one-minute summaries written before merger. Have students identify the reasons they changed their positions.

Newspapers are, of course, businesses. Since most newspaper revenue comes from advertising, have students experiment with selling advertisements. Here is another suggestion for an activity that requires one class period.

During holiday periods, especially Valentine's day, students send candygrams or buy ads in student papers. Bring in four helium-filled balloons and flow markers. Each newspaper can sell space to the highest bidder and that newspaper will display the message for the first half of the class period. Payment can be in terms of real money (for a class fund), play money, or citizenship points.

- Debrief the result by recording on the board the amount of ad revenue collected by each paper. At midperiod, have another round of ad sales but only after the four newspaper teams merge into one.
- Offer an incentive to the four former "owners" to maximize ad revenue (payment in real, play, or points terms) after a monopoly is formed. Each of the four former independents will share equally in this monopoly revenue that flows from a sale of a second round of ads.
- Note that as few as one ad may maximize revenue to the firm, depending on the class and timing of the experiment. Extend the lesson to point out that a monopoly cannot charge anything it wants if the market will not bear the charge. Also indicate that the sale of one ad at a high price might actually bring in less revenue than if a lower price were charged and several ads were taken.
- Refer to the DATABASE section for information on newspaper circulation and newspapers' share of the media dollar.

3. Discussion Questions:

If both Detroit newspapers fail, what will happen to advertising in Detroit?

a. Speculate why St. Louis, MO failed to absorb a second paper, The Saint Louis Sun, when it attempted to enter this news market in 1989.

Send a reporter to the library to check the periodic index under The Saint Louis Sun to find reasons given in the press.

That student can submit a brief written or oral report to the class.

b. Network radio receives a declining share of dollars spent on electronic advertising. NBC radio is no longer a network of affiliated stations. A similar trend seems to be emerging in network television. Syndicated and independent programming gains from the declines in networked programming. Ask students to develop analytical models which explain the trend away from monopoly.

- This topic lends itself to a cooperative learning task with one student preparing pie charts and line graphs of trends within the news media. By referring to the data bank, students can show trends in advertising revenue by type of media. Use the chalk board or butcher paper to divide the class into media groups: newspaper, television, magazines, and radio. Have each team explain with diagrams (line, bar, or pie charts) trends in national market shares between 1970 and 1987.

Teacher Databank #1-1

Monopoly and Antitrust

1. Give students information about the structure of the news media. Using advertising revenue as a measure of popularity of the various media, point out:

   a) market shares have been stable, with only minor decreases in newspaper shares and modest gains in television revenues.

   b) how much revenues have grown, even though shares are fairly constant.

MARKET SHARES OF U.S. ADVERTISING REVENUES

	1970	**1980**	**1985**	**1987**
Newspapers	29.2%	27.6%	26.5%	26.8%
Magazines	24.6	24.0	23.0	23.6
Television	18.4	21.4	22.2	21.8
Radio	6.7	6.9	6.9	6.6
Mail	14.1	14.2	16.4	17.4
Other	7.0	5.9	5.0	3.8
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total Amount Spent on Advertising In $Billions	**$19.5**	**$53.5**	**$94.7**	**$109.6**

Source: Statistical Abstract of the United States 1989. Table 920.

NEWSPAPER CIRCULATION FIGURES

Year	**Number of Daily Newspapers**	**Population of the U.S. in millions**
1970	1,748	204
1980	1,745	227
1985	1,676	239
1987	1,645	244

Source: Statistical Abstract of the United States 1989. Table 900.

Teacher Databank #1-2

Monopoly and Antitrust

Questions:

1. How large were radio advertising revenues in 1987?

   Answer: **.066 (the market share) x $109.6 billion (amount spent on advertising in 1987)** (seeTeacher Databank #1-1).

2. Have newspaper advertising revenues fallen since 1970?

   Answer: No. Although the market share declined, newspaper ad revenues increased from **$5.7 billion (.292 X $19.5 billion) to $29.4 billion (.268 X $109.6 billion).** Newspapers thus claimed smaller shares of a much larger pie.

3. Since the circulation of daily newspapers has remained at 62 million since 1970, what must have happened to readership per capita?

   Students will need to connect data from the prompt that circulation is unchanged at 62 million in each year shown and divide population into it. Although young children are included in the total population, per capita circulation is a rough index of readership. If everyone read the paper and if the typical household contained four persons, then a single subscription would generate a circulation index of .25. That index shows a steady decline from .305 in 1970 to .258 in 1986.

4. What do advertisers market in magazines?

   Ranked below are the products and services that are the biggest revenue makers for magazine publishers.

   a) Lead a discussion with students about why these products need so much advertising. Drawing from what students know, do the ads mainly ask buyers to switch brands or do they attempt to move consumer dollars into new markets?

   b) Have students bring in the sports section and the main section of a daily newspaper. Classify the kinds of ads that appear in Section A and in the Sports pages. How do they differ? (Point out the dominance of automotive products in the sports section.) Use the class survey to get students who answered that they do read the newspaper if they read the sports pages. Have the class identify differences among its members as to the kind of advertising that appeals to them.

Teacher Databank #1-3

Monopoly and Antitrust

U.S. Patent, Copyright, and Trademark Activity in 1987

Patent Activity in 1987

Patent applications	139,800
Patents issued	89,400
Copyrights	582,200

Source: 1989 Statistical Abstract of the U.S., Tables 874 and 917.

Subject Matter of Copyrighted Material 1987

Monographs and computer software	154,900
Semiconductor chips	1,000
Serials (magazines etc.)	131,000
Sound recordings (tape, cd, records)	31,900
Renewals	45,500
Musical Works	161,100
Works of visual arts (e.g. videos)	57,100

Source: Statistical Abstract of the United States 1989, Table 917.

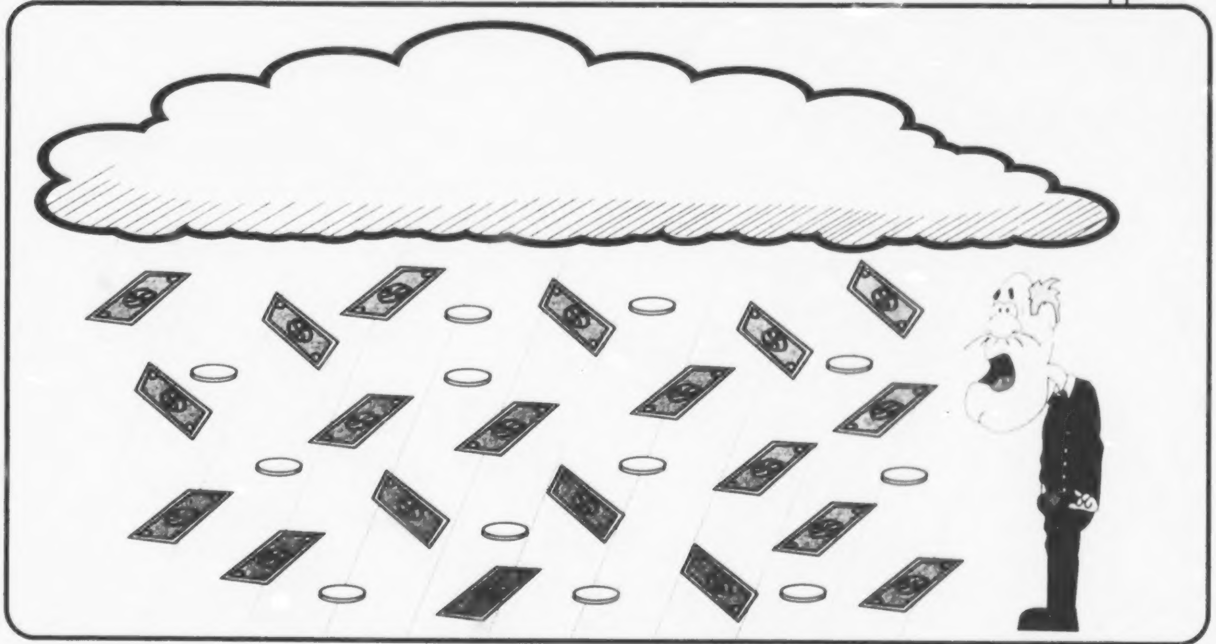
a) Thousands of monopolies are created when the Library of Congress issues a copyright to authors. These monopolies range from brilliant intellectual works to banal pulp novels. Ask students why school districts can't save money by photocopying one textbook and passing copies to members of the class. Extend this discussion to digital audio tapes and the reasons that the U.S. recording industry is concerned. (perfect copies can be made from one cd onto many DATs). Reinforce the definition of monopoly: one seller in a single market. Since there are thousands of products, there can be single sellers for each of them. Each classroom textbook is a monopoly for that title but will be in competition with similar textbooks until a textbook adoption occurs. The Beatles recorded for Apple Records™, and rerecordings generate royalties for Apple Records™. Each Beatles album is a monopoly and has high value. In contrast, if Keith Noname were to write and record a worst seller, such as the Waltz of the Killer Tomatoes, the monopoly would be useless since one seller would have no buyers.

b) Nintendo's computer chip was patented before 1987. It is not counted in the 1987 tally, but it will remain as a government-protected monopoly for 17 years from the licensing date, unless a court finds that it is not valid. Contrast this government duty with the obligation of government to maintain competitive markets. This is the arena where Atari clashes with Nintendo. Atari claims that the patent is designed to limit competition by locking out games not licensed by Nintendo.

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

MONEY & INFLATION



COULD IT BE THAT:

MORE MONEY WILL NOT MAKE US BETTER OFF?

BEST COPY AVAILABLE

MONEY AND INFLATION

COULD IT BE THAT:

MORE MONEY WILL NOT MAKE US BETTER OFF?

PRIMARY ECONOMIC CONCEPTS

- Definitions of Money
- Monetary Policy
- Inflation

LEARNING OBJECTIVES

This module will enable students to:

- define more accurately what money is , the forms it has taken, and the role it plays within an economic system.
- describe the relationship between the price level and the amount of money in circulation.
- define the difference between "soft money" and "hard money."

POTENTIAL LEARNING HURDLES

A topic that is directly related to the concept of money is the interest rate. Many students have trouble in conceptualizing interest rates (the premium that must be paid to people in order to induce them to postpone their own consumption). The most intuitive way to justify the existence of interest rates is to ask students whether they would rather have $1,000 today or a promise (from someone who is completely trustworthy) of $1,100 in one year. This relationship between borrower and lender can be a bit illusive for many students.

This topic is explored further on page 7 of the Learning Hurdle chapter.

BACKGROUND

An important relationship is that between the amount of money in circulation and the general price level. While economists argue about the exact nature of the relationship, it is clear that an excessive increase in the money supply will cause the price level to rise (inflation). Many students will ask why the government doesn't simply print the money to pay off the government debt. Similarly, it is appealing to some students to think that it would be great if the government simply printed more money and gave it to the populace. In fact, such a policy is common in many countries in which workers are granted virtually continuous wage increases that offset continually rising prices. Government simply prints more money, and the wage/price spiral continues. With more money and inflation, debtors pay back less valuable dollars than they borrowed. Prices are higher, so a dollar buys less, and lenders lose purchasing power.

This effect of inflation is the basis of the "greenback" and "gold/silver" controversies of the nineteenth century. In general, farmers and workers favored soft money (greenbacks or silver), which led to inflation, while the monied Easterners favored hard money (gold), which led to deflation. The serious deflation of the post-Civil War era led to the monetary controversy of the 1896 election and Bryan's famous "Cross of Gold" speech, in which he defended the soft money position with his statement, "You shall not crucify mankind upon a cross of gold."

NOTES TO THE TEACHER

This module shows the relationship between excessive monetary expansion and the rate of inflation. It should sensitize students to the mistaken belief that printing more money necessarily has a positive effect on the economy. The gold/silver controversy of 1896 and 1900 demonstrates the differential impacts of inflation and deflation on various economic groups.

SUGGESTED ACTIVITIES

1. Circulate some type of currency such as paper clips or popcorn, handing out one per student. Auction some item such as a bag of candy. Record the selling price once the auction is complete. Now circulate much more of the currency (five per student) and conduct the auction again. Record the selling price. The second price will be higher than the first. Ask the students why the second price is higher. The reason is the increase in the money supply. More money

caused higher prices. Were they better off because they had more money? No because there were no more goods and services, prices simply rose.

Of course, the relationship is neither as simple nor as direct as suggested by this activity but the activity does make it clear that increases in the money supply with no increases in output (the candy) will cause inflation. As suggested in the background information, some people do benefit from inflation and this activity does not illustrate that point.

SAMPLE DISCUSSION QUESTIONS

1. What is wrong with inflation?

   Answer: among other things, it arbitrarily redistributes purchasing power away from people on fixed incomes, from lenders to borrowers, and those who can increase their incomes beyond the rate of inflation and borrowers. As illustrated by the Wizard of Oz activity, deflation can have similar effects but in the opposite direction.

ANSWERS TO HANDOUTS

Answers to Handout #1-3

1. Money is a medium of exchange that allows individuals to exchange goods and services for other goods and services, regardless of whether the parties doing the exchanging want each others' products.

2. The value of money used to be derived from the value of gold or silver that was to back up the paper currency. Since the end of the gold standard the value of money has come solely from our own belief in the system and our faith that when we want to turn in $1.00 we can get what we feel is $1.00 worth of goods or services.

3. Soft money has no backing; its value is derived solely from people's faith in it. In inflationary times its value is diminished. Hard money is backed by gold and thus retains its value in inflationary times, because gold retains its value as a backing for money and as a commodity.

4. Answer: A - the borrower. You now own a relatively new car which is an asset that has just increased in nominal value (the car is worth more than $20,000 now), and the $20,000 you will be paying back to the bank is worth a lot less. Therefore the lender is far worse off.

Answers to Handout #2

The Scarecrow	(5)
The Cowardly Lion	(2)
The Wizard of Oz	(4)
The Tin Man	(3)
The Wicked Witch of the East	(1)

Answers to Handout #3

1. Printing money would simply cause inflation without making people better off.

2. Although undesirable, inflation may be the lesser of evils if the economy is also facing widespread unemployment. In such a case, accepting a little inflation may prevent an even more serious recession.

Name: **Date:**

Handout #1

Some Folklore About Money

Most students and many teachers are mystified by the concept of money. The economist's definition of money as "Money is as money does" is often not very helpful. The purpose of this brief lesson is to provide some interesting facts about money and the U.S. experience with money.

While there are many functions that money fulfills, the most important is that it acts as a "medium of exchange". That phrase is often not very helpful to students. All it means is that money allows individuals to exchange goods and services for other goods and services, regardless of whether the parties doing the exchanging want each others' products. I can go to the store and exchange my labor (teaching economics) for some vegetables, regardless of whether the grocer wants to learn any economics. Those who do want economics taught pay me with money and I use that money to exchange my labor for the vegetables.

Throughout history, there have existed two types of money, commodity and fiat money. Commodity money is fairly self explanatory; it is money that has a use as a commodity, such as salt or tobacco. Many items have been used as money and the list is interesting: animal teeth, bark cloth, barley, beads, boar tusks, brass rode, butter, cattle, cigarettes, coins, copper wire, feathers, fish, fur, hemp hides, iron hoes, knives, lead, liquor, lumber, mats, oats, peas, pieces of paper, playing cards, pork, porpoise teeth, rocks, rye, salt, sea shells, silk, slaves, strings, sugar, tar, whale teeth, wheat, woodpecker scalps (ivory billed) and wool have all been used as money. This list is not exhaustive. Many of our words and phrases result from the use of different commodities as money. The word salary and the expression that a person is "not worth his salt" comes from the use of salt (in Latin, sal) as money. The monetary or "pecuniary" aspects of an issue come from the fact that a cow (in Latin, pecus) could be used for money in Rome.

Wampum is a word that is often used in humor, but its use as money among certain Iroquois tribes was anything but humorous. Wampum was a bead formed by taking shells from a particular lake and polishing them. The shells were then strung and used on belts. One of the major forms of currency in the area around the lake was wampum belts that were actually denominated depending upon how many beads were on the belt. Wampum worked fairly well as a currency and was once the official money of the Massachusetts Bay Colony (as was tobacco later). Legend (in other words, history that cannot be documented) claims that the Indians who controlled the currency did a fine job producing high quality wampum and guaranteeing that the money supply was properly regulated. Greedy colonists, however, seeing the opportunity for quick riches, conquered the tribe and killed them, taking over the wampum supply. Being lazy, they failed to produce high quality wampum and flooded the market with the low quality beads. As a result, wampum was no longer "acceptable as a medium of exchange," and its value as money vanished. There are undoubtedly many morals in this story, but I will give you the opportunity to develop them.

The history of money in the colonies and in the United States is interesting. Fiat money is money that is declared to be so by some governing authority. The U. S. dollar has no gold or silver behind it. Its "backing" is the productive capacity of the U. S. economy and the

Name: Date:

Handout #1 - 2

Some Folklore About Money - continued

confidence that holders of the dollars have in the currency. The confidence factor has been a problem from time to time in our history. In the colonies and through the Revolution, many different commodity monies were used such as wampum and tobacco. The problem with commodities is that they tend to vary in quality. We might agree on the selling price of a cow as four bales of tobacco, but if that tobacco is riddled with holes and full of worms, the buyer is likely to be dissatisfied. People felt much safer with precious metals such as gold and silver because they could always melt the coins down and sell the money as gold or silver. The Spanish dollars or "pieces of eight" were the primary currency in the pre- and post-Revolutionary War era. They were called pieces of eight because they could be broken into eight pieces, so that a quarter of a dollar was two bits, a half of a dollar was four bits, and so on. The word dollar itself comes from the Hungarian word "thaler", which was the currency in use in a small valley or "thaler" in Hungary. According to one view, the dollar sign itself comes from two letters in the Spanish word peso, with the "p" superimposed on the "s". Another legend suggests that colonists wished to claim ownership of the dollar. To distinguish our dollar from that of the Spanish, the two "pillars of Hercules" were scratched through the "S" in the word peso and the silver coin was called the "pillar dollar".

The history of the first official paper currency of the new government is fairly well known. When financing the Revolution became difficult, the Continental Congress began issuing paper currency called Continentals. As the supply of the currency increased, people became suspicious of the currency's worth and the expression "not worth a Continental" became common. The patriot soldiers were paid in this currency and one of Washington's promises was that he would, as President, redeem the Continentals. The soldiers were, eventually paid in new and more reliable currency at ten percent of their face value (or one percent depending upon which source is believed).

The history of currency in the late nineteenth century is one of sectionalism. Westerners and farmers tended to be in debt and, as result, wanted a "soft currency" that would lose its value as inflation occurred so that they could repay their debts with less valuable money. The Eastern establishment and the bankers (who tended to be lenders) wanted a "hard currency" that would maintain its value so that they would be repaid in currency of equal value with that loaned. The "soft money" people were pushing for paper money called Greenbacks or, at worst, silver currency. The "hard money" advocates wanted gold. Thus the famous quote of the Democratic populist, William Jennings Bryan, "Thou shall not crucify mankind upon a cross of gold."

The hard money/soft money controversy has not vanished; in fact, some today accuse the central bank of the United States, the Federal Reserve Board, of promoting policies that are anti-inflationary at the expense of employment. The controversy is not likely to vanish as long as debtors and creditors exist.

Name: **Date:**

Handout #1 - 3

Some Folklore about Money

Your Money IQ

Answer the following questions based upon what you have just read:

1. What is money?

2. What gives money its value?

3. What is the difference between soft money (like cash) and hard money (like gold)?

4. Suppose you borrow $20,000 from the bank (cash is safe money) and promise to pay it back in one year. The next day you purchase a brand new car with the $20,000. Three months after you purchase the car the country experiences tremendous inflation.

   Question: Who is better off?

   A. You, the borrower of the $20,000, and the owner of the new car.
   B. The bank, the lender of $20,000, and the owner of your IOU (your promise to pay the loan back).

   Explain your answer:

Name: Date:

Handout #2

Money, History, and The Wizard of Oz

A man named Henry Littlefield wrote an article suggesting that the famous story The Wizard of Oz was, in fact, a political allegory (an allegory is a story that represents symbolically something real) expressing sympathy for the farmers and industrial workers in the 1896 and 1900 elections. You should recall from the reading that farmers and others who were frequently in debt favored **soft money** like silver. Silver at that time did not hold its value very well in times of inflation. Farmers who would borrow in silver, as opposed to gold, would actually be much better off in inflationary times. If you owe someone silver and inflation makes the silver less valuable, you, the borrower, actually pay back less money than you borrowed.

According to Littlefield, the title itself represents an ounce (Oz) of gold or silver, and the yellow brick road refers to the gold standard. Dorothy's **SILVER** slippers (which became ruby in the movie) are a reference to soft money. Dorothy and her friends represent the soft money proponents, whereas the Wizard and the land of Oz itself represent the Eastern financial establishment.

Based upon that information, match the following characters of the story to their real life counterparts:

_____The Scarecrow (made out of straw)

_____The Cowardly Lion (a loud roar but with no bite)

_____The Wizard of Oz

_____ The Tin Man

_____ The Wicked Witch of the East

1. The large (often depicted as evil), corporations, and the Eastern financial establishment.
2. William Jennings Bryan: The famous Populist Politician, who loved to make speeches.
3. Labor - The common factory worker
4. President McKinley - Trying to please everyone.
5. The Midwestern Farmers

Name: **Date:**

Handout #3

What's Wrong With This Way of Thinking?

Problem #1

"The government should just print more money to pay off the national debt."

1. What's wrong with this way of thinking?

Problem #2

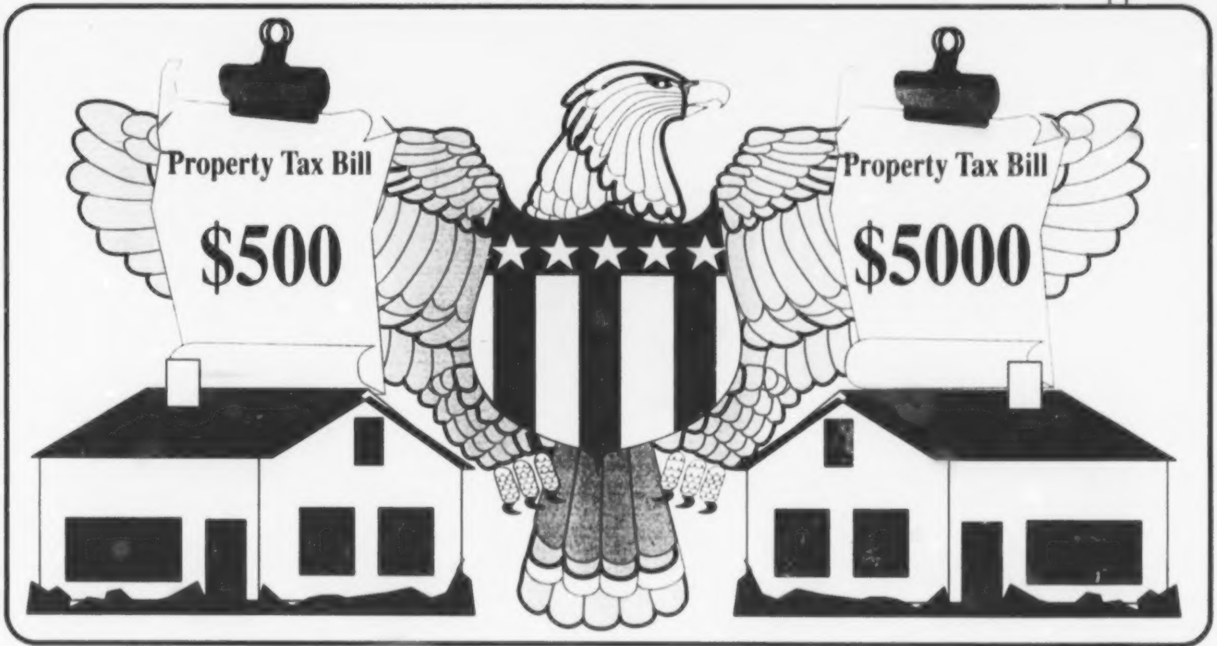
"INFLATION IS ALWAYS A BAD THING"

1. What's wrong with this way of thinking?

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

PROPOSITION 13
TAXES AND ECONOMICS


Property Tax Bill
$500
Property Tax Bill
$5000

COULD IT BE THAT:
LOWER TAXES DON'T ALWAYS MAKE US BETTER OFF?

Proposition 13

TAXES AND ECONOMICS

COULD IT BE THAT

LOWER TAXES DON'T ALWAYS MAKE US BETTER OFF!

PRIMARY ECONOMIC CONCEPTS

- The economic role and function of taxes

LEARNING OBJECTIVES

This module will enable students to:

- identify the standards of an ideal tax
- explain the economic functions of taxation in our economy
- evaluate various tax policies and tax strategies based upon standard taxation criteria.

BACKGROUND

Proposition 13 may not survive in its present form to become a teenager. Equity is threatened by unequal treatment of owners of otherwise identical real estate, except for the date of acquisition of the property. In that 1978 initiative, the law provides for a cap on the tax rate of one percent on assessed market value. Another initiative, the Fair Share Property Tax Act of 1990 proposes to modify Proposition 13 to soften the disparate tax bills among homeowners by splitting the tax-roll into residential and non-residential parts. After withstanding legal challenges for a decade, this Proposition may not have a lucky number when initiative and supreme court challenges make a frontal assault in the near future.

NOTES TO THE TEACHER

Economists evaluate tax systems based on a set of equity and efficiency criteria. An ideal tax would meet all of the following standards:

- Taxes need to take purchasing power away from the private sector, in order to reallocate resources for public use.
- Taxes need to be predictable.
- Taxes need to be neutral, in the sense that they do not distort individuals' decisions.
- Taxes need to be simple administratively.
- Taxes need to be fair.
- Taxes need to be consistent with the stability of the economy.

Of course, no real-world tax can satisfy all of these criteria simultaneously; in fact, no tax is totally neutral. Every realistic tax discourages some choice (the taxed activity) relative to another (an untaxed alternative). There are always trade-offs inherent in tax policy, and there will always be winners and losers from any policy change. MIT Economics Professor Lester Thurow asserts correctly that there is no policy so good that there are no losers, nor is there any policy so bad that there are no winners. This is as true for tax policy as it is in other areas of public policy.

ACTIVITIES

1. Conduct a classroom simulation in which students are to decide on a taxation strategy for themselves and evaluate the taxes they have created. Implement the simulation as follows:

STEP 1

Divide your class into four distinct groups:
  a. The Poor
  b. The Middle Class
  c. The Upper Middle Class
  d. The Wealthy

Make the groups disproportionate in size, i.e. the poor and the wealthy will be much smaller than the middle, and upper middle class. The actual mix can be varied. Variations on the proportionate size of the various groups will lead to different results which may lead to some interesting discussions during the debriefing portion of the simulation.

STEP 2

Give each individual an envelope containing a certain amount of the bills provided. (Handout #1-1). Distribute with the following formula, and write this on the board so that every student knows what the others have:

The Wealthy	$10,000 each
The Upper Middle Class	$6,000 each
The Middle Class	$3,000 each
The Poor	$1,500 each

Inform the students that they have just received their income for the year. Tell the students that according to government statistics an individual needs to earn at least $1,300 just to barely survive with today's prices.

STEP 3

Announce that they have received their GROSS INCOME and they must still pay taxes with that money. Handout 1-2 provides a list of things that the government has decided are essential purchases (they must purchase everything on the list).

The students' job is twofold:

1. They must decide who is to receive these goods. While they have to purchase everything on the list, they may decide to target those goods to specific groups of students.

2. They must decide how much of their income every person is to give up in order to pay for it.

They may choose any type of tax structure they wish, from a flat tax, to a certain percentage of each person's income. However, they must decide upon a tax policy this policy must be applicable to all who fit that category. In other words, they can decide that all left-handed students will pay 50% of their income, but they cannot make one left-handed student pay more than another left-handed student, unless another tax criteria applies to that student.

Have each of the four groups choose a spokesperson and then give them time to discuss tax policies in their groups. (Note: You may wish to give them a couple of suggestions to get them on the right track) Have each group give a two minute presentation on its particular plan.

STEP 4

After each group has presented, conduct the class as if it were a Congressional Tax Committee Meeting. See if you can get a consensus as to how the current budget will be financed. In other words develop a class tax plan.

STEP 5

After they have completed Step 4, pass out Handout #1-3, which lists some standard criterion for an ideal tax, and have them evaluate their tax policy based upon those criterion. After they have been given enough time to write a response, discuss it with the class as a whole.

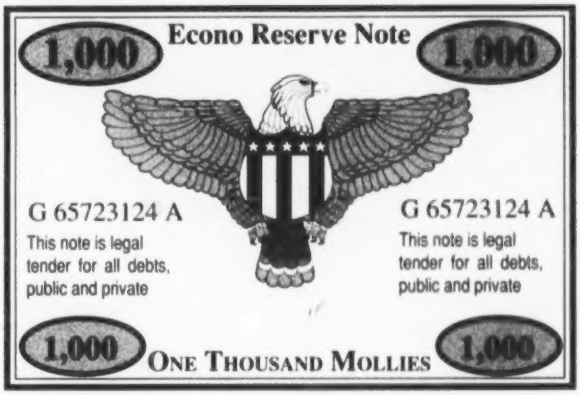
2. Conduct a classroom discussion of why we have taxes–is it just to raise money for government? In answering this question, students should consider the fact that government is clearly capable of spending money it doesn't have, by borrowing or printing money (especially at the federal level). Students should realize that taxes release purchasing power for public spending, redistribute income according to our social goals, encourage or discourage certain types of behavior (such as cigarette taxes to discourage smoking), and help to stabilize the economy (as in the case of federal fiscal policy). Ask the class to give examples of taxes designed to achieve each of the above goals.

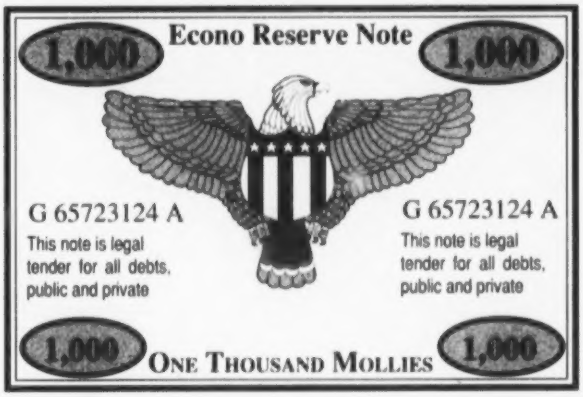
3. Challenge your students to devise a tax change so good (or so bad) that everyone will benefit (or everyone will lose). They should discover that even a disastrous tax hike that causes another Great Depression would benefit some groups. For example, movie ticket sales tend to rise during a recession, apparently out of a need to escape from reality.

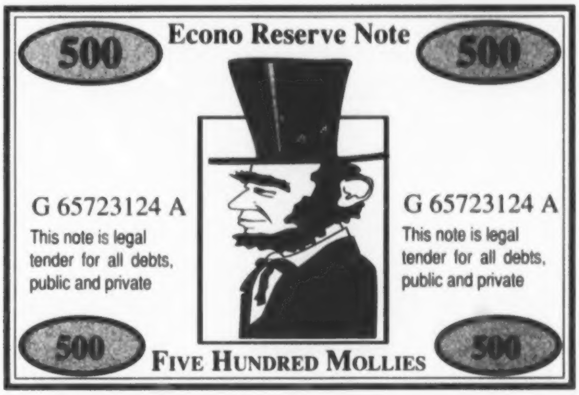
Name: **Date:**

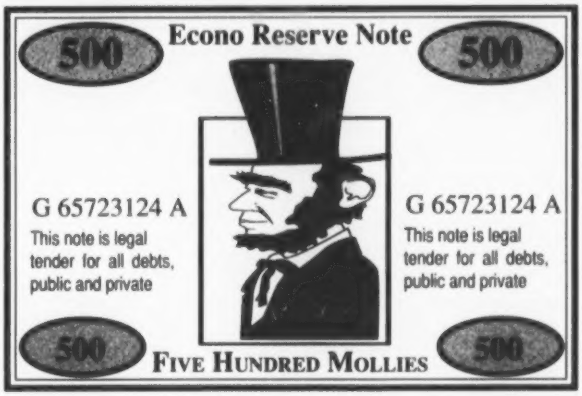
Handout #1-1

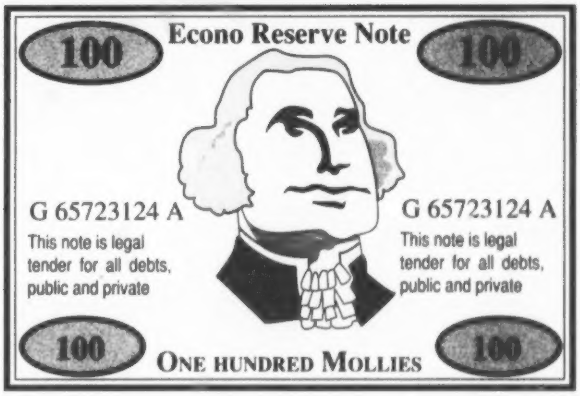
Classroom Mollie Notes

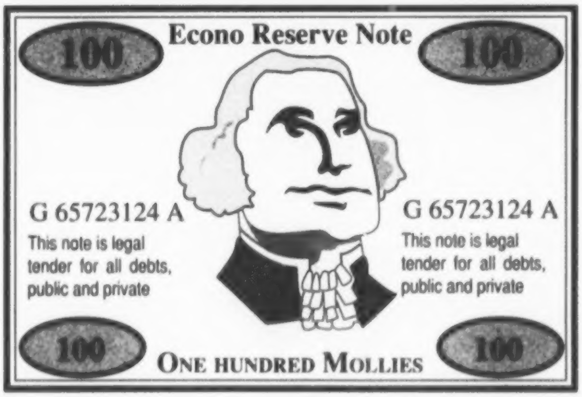

1,000
Econo Reserve Note
1,000
G 65723124 A
This note is legal tender for all debts, public and private
G 65723124 A
This note is legal tender for all debts, public and private
1,000
ONE THOUSAND MOLLIES
1,000


1,000
Econo Reserve Note
1,000
G 65723124 A
This note is legal tender for all debts, public and private
G 65723124 A
This note is legal tender for all debts, public and private
1,000
ONE THOUSAND MOLLIES
1,000


500
Econo Reserve Note
500
G 65723124 A
This note is legal tender for all debts, public and private
G 65723124 A
This note is legal tender for all debts, public and private
500
FIVE HUNDRED MOLLIES
500


500
Econo Reserve Note
500
G 65723124 A
This note is legal tender for all debts, public and private
G 65723124 A
This note is legal tender for all debts, public and private
500
FIVE HUNDRED MOLLIES
500


100
Econo Reserve Note
100
G 65723124 A
This note is legal tender for all debts, public and private
G 65723124 A
This note is legal tender for all debts, public and private
100
ONE HUNDRED MOLLIES
100


100
Econo Reserve Note
100
G 65723124 A
This note is legal tender for all debts, public and private
G 65723124 A
This note is legal tender for all debts, public and private
100
ONE HUNDRED MOLLIES
100

Name: **Date:**

Handout #1-2

Government Expenditures

Directions:

The following is a list of **essential goods** as identified by the government. The costs are represented in costs per student. To come up with a total tax bill for your class simply multiply the total times the number of students enrolled in your class (absent students count as well).

You have been grouped on the basis of socio-economic status. In other words the rich are with the rich, and the poor are with the poor, etc.

You have two jobs to accomplish within your group:

Job #1:

Decide how much each individual is to pay out of his or her salary to pay for the goods on the list (The salary for each of the groups is listed below).

Job #2:

Decide on who is to take ownership and control of the items on the list. In other words goods and services like desks, teacher time, and VCR viewing time do not necessarily have to be divided evenly among each student.

List One - Income Distribution (In Mollies)

The Wealthy	$10,000 per person
The Upper Middle Class	$6,000 per person
The Middle Class	$3,000 per person
The Poor	$1,500 per person

Government statistics has indicated that at current prices a minimum salary of at least $1,300 is needed to just barely survive.

List Two - Essential Government Expenditures

per person enrolled in your class

Classroom Teacher	$200.00
Classroom Rent	150.00
Books	50.00
Desks	30.00
Support Staff (Administrators, Custodians, etc.)	20.00
Misc. Supplies (TVs, VCRs, Paper, Pencils, Etc.)	50.00
Total	**$500.00 per student**

Name: Date:

Handout #1-2 - continued

Government Expenditures

Job #1 - Who Pays?

In the space below write down your group's plan as to who and how much each individual is going to pay in taxes. Please make sure that you total up the expected amount of tax revenue you will receive if your plan is chosen, and make sure it is enough to cover the government's total tax needs. A surplus is all right, but this current administration does not want any deficits!!

Job #2 - Who Gets?

In the space below briefly describe who should receive the government goods in question. For each good choose one of the following:

A. Everyone shares equally
B. A specific group of people will receive it, (i.e., only the poor).

Name: Date:

Handout #1-3

Evaluating Tax Policies

Now that you have decided upon a tax policy it is time to evaluate your work. Listed below are several criteria for a "good tax." At the bottom of the page write a short evaluation of your tax policy, using the following standards.

A Good Tax Needs To Be:

- *predictable.*
- *neutral, in the sense that it does not unintentionally distort individuals' decisions. This means that the tax itself should not accidentally alter people's behavior.*
  (For example, an income tax should not have rates so high that people quit working.)
- *simple to administer and collect.*
- *fair.*
- *consistent with the stability of the economy.*

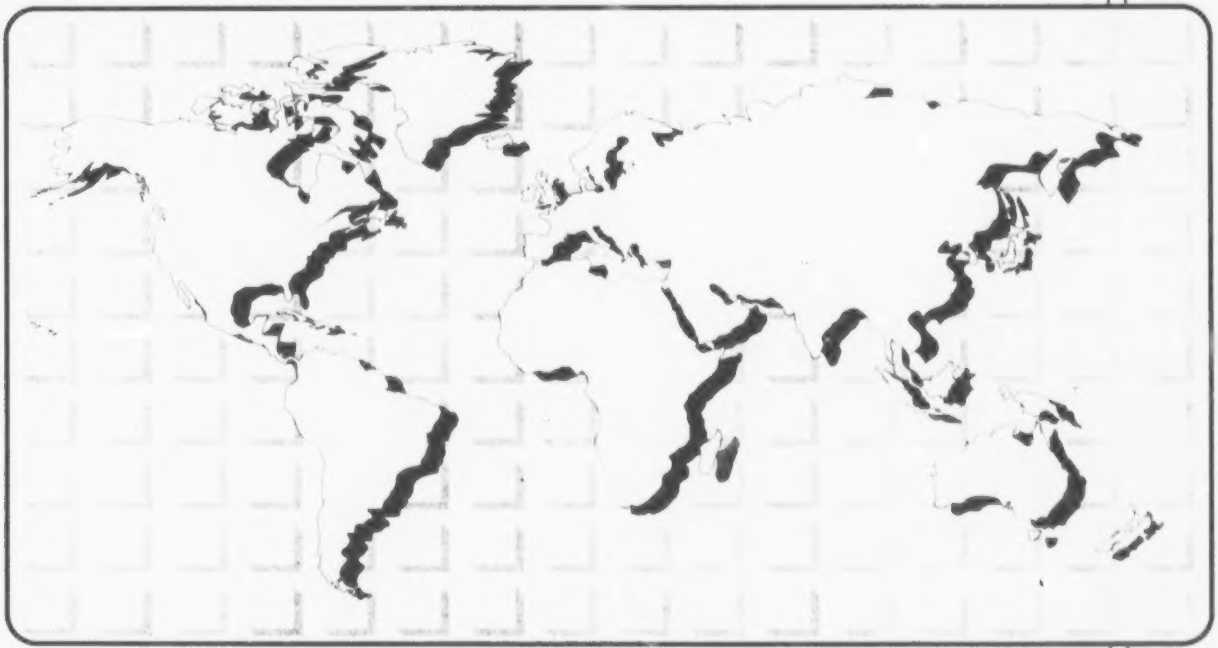
According to these criteria, evaluate your class's tax policy. Identify both its good points as well as its weaknesses.

ECONOMIC EDUCATION MANDATE: HANDBOOK FOR SURVIVAL

CLASSROOM APPLICATIONS

INTERNATIONAL TRADE:

THE U.S. IN A GLOBAL ECONOMY



COULD IT BE THAT:

BUYING FOREIGN GOODS CAN MAKE US BETTER OFF?

Module #10

International Trade:

THE U.S. IN A GLOBAL ECONOMY

COULD IT BE THAT:

BUYING FOREIGN GOODS CAN MAKE US BETTER OFF?

PRIMARY ECONOMIC CONCEPTS

- Comparative and Absolute Advantage
- Scarcity
- Barriers to Trade

LEARNING OBJECTIVES

This module will enable students to:

- cite examples of how individuals benefit from trade in the same way that countries do.
- utilize the concept of absolute and comparative advantage to demonstrate how nations benefit from trade.
- describe the effects of barriers to free trade.
- determine which groups gain and which groups lose from both free trade as well as from the imposition of trade barriers.

POTENTIAL LEARNING HURDLES

COMPARATIVE AND ABSOLUTE ADVANTAGE

Students may encounter difficulty in comprehending that one individual who can outperform another individual in every way may nevertheless be able to work out an advantageous exchange with the less competent person. They need to be shown that although the efficient person may be absolutely superior at everything, the less efficient person may be able to perform relatively better at some particular activity. Therein lies the potential for advantageous exchange.

The following is an example that may help students understand this concept. Suppose that the high school football team hasn't won a game in two years. A new superjock, Joe Cool, transfers to the school. Although not known for his modesty, Joe is far better than any of the starting 11 offensive players; that is, he has an absolute advantage at every position. Ask the students how the coach should decide what position Joe should play. They should discover that he would be most valuable wherever he would make the greatest relative contribution; in other words, the coach should utilize his comparative advantage. For example, if Joe would be an excellent wide receiver but an all-state quarterback, his comparative advantage would be at quarterback. The opportunity cost of this decision would be losing him as a wide receiver, which would be less costly than losing him as an all-star quarterback. No matter how good he is (absolute advantage), scarcity prevents him from playing more than one position at a time. Point out that just as Joe Cool cannot play every position, scarcity prevents countries from producing everything for the rest of the world. By specializing in producing one type of good, countries use resources that could have been used in another type of production.

For more information in helping students identify and overcome this particular learning hurdle you may refer to Chapter 3, pages 8 and 9.

BACKGROUND

Students (and many others) often assume incorrectly that trade is a zero-sum game; that is, for every winner there must be a loser. One of the most important points to get across in economics and the beauty of trade is that it is a win-win situation. Both parties must stand to gain, or they would not engage in voluntary trade. When John buys a car or a house (or a sack of groceries, for that matter) from Susan, it means that he values the item purchased more than he values the money spent. Conversely, Susan must value the money more than she values the item sold, or she would not have agreed to the sale. This basic concept applies to trade between individuals, as well as trades between regions or nations.

NOTES TO THE TEACHER

To get this point across to your students, remind them that voluntary exchange is the basis for supply & demand analysis, in which the supply curve represents willingness to sell, and the demand curve represents willingness to buy. If students understand supply & demand and the law of comparative advantage, they can understand the advantages of unrestricted trade. Of course, no matter how great the advantages of free trade, there also will be disadvantages: there are no policies so good that everyone wins or so bad that everyone loses. This module will enable students to weigh the advantages and disadvantages of free trade, by identifying winners and losers.

OTHER ACTIVITIES

1. Role-playing exercise. Divide your class into the following seven groups: (1) Shareholders in U.S. auto firms, (2) U.S. auto workers, (3) U.S. auto consumers, (4) Japanese auto producers, (5) U.S. consumers of agricultural goods, (6) Japanese consumers of U.S. soybeans, and (7) U.S. farmers. Explain to the groups that Japan has agreed to restrict automobile exports to the United States. Fewer imported cars means fewer U.S. dollars flowing from the United States to Japan. But that also means fewer dollars for the Japanese to spend on American agricultural products such as soybeans.

2. Have students create a bulletin board in your class on the topic of international trade with newspaper or magazine articles collected by students.

DISCUSSION QUESTIONS

1. A Kansas wheat farmer has a "Buy American" bumper sticker on her Ford truck.

   Why do you suppose she dislikes imports? What would happen to her standard of living if we all took her advice? Explain any changes in the price of trucks sold in the U.S., along with the predicted effect on U.S. wheat prices. Where do foreign consumers get the dollars to buy our wheat?

2. "The popularity of protectionist policies such as tariffs and quotas shows that people don't behave rationally, because free trade benefits everyone."

   Evaluate. Are there no losers from free trade?

3. "The problem with the Law of Comparative Advantage is that it assumes that everyone can compete at something. It doesn't work when one trading partner can outproduce the others in producing everything."

   Do you agree with this statement? Explain.

4. "Americans owe it to one another to buy American...If we don't buy as many American-made products as we can, we're going to lose our way of life. If enough Americans buy only American-made products, then prices will come down. Trade's killing us!"

   Do you agree? If we refuse to buy foreign goods, will that bring down the prices of American products? Use supply and demand curves to show the likely effects of a shift in consumption in favor of domestic goods.

ANSWERS TO HANDOUTS

Answers to Handout #1

1. Betsy is better at cleaning dishes.
2. 3 loads in one hour.
3. 20 minutes (60 minutes divided by 3 loads).
4. Betsy is better at sweeping trash.
5. 4 loads of trash in one hour.
6. 45 minutes (they can do 4 loads in an hour, or one load every 15 minutes).

Answers to Handout #2

1.

To finish on time: Option 4

Option #1 - Dishes:........................20 mins
Trash:........................45 mins
Total:..................65 mins

Option #2 - Dishes: ....30 mins
Trash: ....3 hrs
Both finished: ....3 hrs

Option #3 - Dishes: ....30 mins
Trash: ....60 mins
Total: ....90 mins

Option #4 - Dishes: ....60 mins
Trash: ....60 mins
Both finished: ....60 mins

II.

1. Option #4
2. Option #3
3. Option #2
4. Option #1
5. Option #4

III.

In essence there is no difference. Students should mention that the question of "good" or "bad" are relative positions depending upon your vantage point. Students should note that the four different options represent different arguments for and against free trade.

IV.

Importing Cars From Japan

1. American consumers are better off.

   American autoworkers are worse off.

   Japanese automakers are better off.

   Japanese farmers who face increased competition from American farmers through free trade are worse off.

2. Basically the opposite of #1. Yet these are not the only groups affected by this. Your

Overhead Transparacy for Handout #1

Applying Comparative Advantage

Household Chores:

(Output per Hour)

	Dishwashing (# of sink loads)	Sweeping (# of trash loads)
Bert	1	1
Betsy	2	3

Name: **Date:**

Handout #1-1

Applying Comparative Advantage

The Predicament of Betsy and Bert

Betsy and her brother Bert must help with the household chores before they can play with their friends.

Their job is twofold:

1. They must wash and dry a sink full of dirty dishes that have accumulated for three days.
2. Sweep up and take out three loads of trash from the garage, which hasn't been cleaned since the summer of '82.

I. The Assignment

Determine the most efficient way to complete both jobs in the shortest amount of time.

Use the information below to answer the next 6 questions:

Household Chores:
(Output per Hour)

	Dishwashing (# of sink loads)	Sweeping (# of trash loads)
Bert	1	1
Betsy	2	3

1. Who is better at cleaning dishes: Bert or Betsy? ________________

2. If they work together, how many loads of dishes can they do in one hour? __________

Name: Date:

Handout #1-2

Applying Comparative Advantage

3. How many minutes would it take for them to wash that one load working together?____________________

Show how you got that answer:

4. Who is better at sweeping trash: **Bert or Betsy?** _______________.

5. If they work together, how many loads of trash can they do in one hour?_______

6. How many minutes would it take for them to take out those three loads working together?_________________

Show how you got that answer:

Name: ____________________ **Date:** ____________________

Handout #2-1

Applying Comparative Advantage

I. Analyzing Data

Now that you have spent some time working with the data, it is time you use that information to formulate a decision.

Bert and Betsy must **SWEEP 3 LOADS OF TRASH** and **WASH 1 SINKFUL OF DISHES** before they can go out to a movie with their friends. If they don't finish in 60 minutes they will miss the show. Under which of the following options would they finish on time? ______________

Option #1

Betsy's parents argue that the only fair way to divide up the work is for both children to work together to do each job. First they will work together and do the dishes, then they will both tackle the sweeping job. Betsy complains that working together wouldn't be fair, because Bert is a lazy runt who won't do his share of the work.

Time to complete dishes: ______________

Time to complete sweeping trash: __________

Total time for both jobs: ____________

Option #2

Betsy argues that they should divide the work in half and work separately. She says that she should do the dishes because she likes that job better, and besides he made most of the mess in the garage, so he should sweep the trash.

Betsy's time to complete dishes: ___________

Bert's time to complete sweeping trash: _____

If they start at the same time, how soon will they both be finished? _____

Option #3

Bert argues that Betsy should do all of the work. He suggests that this would be the most efficient option because she is so much faster and better in doing both jobs.

Time to complete dishes: ______________

Time to complete sweeping trash: __________

Total time for both jobs: ____________

Option #4

Betsy's boyfriend Ben, who has just taken economics in school, tells them that they are all wrong because each person should concentrate on what he or she does best. Ben recommends that Betsy should do all the sweeping because of the two jobs she is better at sweeping, and Bert should do all the dishwashing because that is what he does better.

Bert's time to complete dishes: ___________

Betsy's time to complete sweeping trash: ____

If they start at the same time, how soon will they both be finished? _____

Name: Date:

Handout #2-2

Applying Comparative Advantage

II. Formulating Conclusions

Option #1 ▪ Option #2 ▪ Option #3 ▪ Option #4

_____1. Which option is most efficient as far as the fastest time possible?
_____2. Which option would Bert think is best?
_____3. Which option would Betsy think is best?
_____4. Which option would Bert's and Betsy's parents think is best?
_____5. Which option would Betsy's boyfriend Ben think is best?

Is there one option that we can say is the BEST? If so, which one and why?

III. Think About It - Write About It

What parts of this exercise would be the same and what parts would be different if Bert were really the country of Bertonia, and Betsy were really the country of Betswali, and instead of sweeping trash and washing dishes these two countries were deciding on who should make cars and who should make computers?

Name: Date:

Handout #2-3

Applying Comparative Advantage

IV. In this exercise Bert and Betsy represented two different countries deciding **what to produce.** Betsy's boyfriend Ben represents consumers, whose primary concern is getting the best product at the lowest price. Notice that efficiency is not the most important factor for everyone, and no matter what option you chose, you could not have pleased everyone. **IN OUR DECISION TO IMPORT CARS FROM JAPAN**, as an example, try to identify the winners and losers when we have free trade, and when we place restrictions on trade and charge foreign countries money to bring their goods into this country.

IMPORTING CARS FROM JAPAN

1. **Free Trade** (no limits to the number of cars brought in and no charge to sell cars in this country)

Which Americans are better off?

Which Americans are worse off?

Which Japanese are better off?

Which Japanese are worse off?

2. **Restricted Trade** (The U.S. charges Japan a fee to sell cars in this country as well as limiting the total amount of cars they can bring in.)

Which Americans are better off?

Which Americans are worse off?

Which Japanese are better off?

Which Japanese are worse off?

California
State Department
of Education
and the
California Council
on
Economic Education

Chapter 3

Chapter 3
Learning Hurdles

Learning Hurdles in Economics

By: Dr. Marilyn Kourilsky
President and Executive Director - California Council on Economic Education

There are several concepts in economics which invariably present students with certain learning hurdles. The effective teacher of high school economics will therefore find it essential to be aware not only of learning principles in the general sense, but also of what these specific economic concepts and learning hurdles are.

For example, if students have difficulty conceptualizing something in relative rather than absolute terms, they will be confounded initially by the concept of economic scarcity, and they may never comprehend the somewhat more intricate notion of comparative advantage. Also, because economics has a cumulative nature, with comprehension of each new concept relying upon comprehension of earlier concepts, it is especially important to help students overcome such hurdles as they arise.

The major learning hurdles encountered by students of economics fall into three categories:

1. *CONCEPTUAL/ANALYTICAL*
2. *SEMANTIC/LINGUISTIC*
3. *ATTITUDINAL*

Learning hurdles of the ***conceptual/analytical*** type arise when, (1) from a developmental perspective, students are "too young" to understand the concept at the desired level of complexity, or (2) from the point of view of task analysis, students have not yet mastered the prerequisite skills or enroute behaviors that are necessary for comprehension of the concept.

To illustrate the first problem, note that a child of six is still at the pre-operational stage of development and is incapable of sustained, systematic thought (Piaget, 1952). Therefore, regardless of the quality of instructional intervention, and no matter how inherently bright the students are, youngsters at this age will not be able to convert data from a demand schedule into a demand curve. Neither will they be able to correctly articulate the difference between absolute and comparative advantage. The solution here is to match the complexity of the material presented to the developmental readiness of the students.

At the high school level, the second type of conceptual/analytical difficulty is by far the more prevalent. As noted earlier, economics is a cumulative discipline, so that mastery of advanced concepts requires mastery of earlier ones. For example, without a grasp of scarcity and opportunity cost, students will have difficulty understanding the nature of demand and supply.

Similarly, if students don't understand the basic feature (law) of demand, which is that individuals buy more of a product at lower prices and less at higher prices, as indicated by the downward slope of the demand curve, they will certainly have difficulty understanding the concept of elasticity (responsiveness of the quantity demanded of a product to changes in its price) and how elasticity affects the shape of the demand curve. Many high school teachers assume that the "average" student is analytically or intellectually unable to understand fully why profits are maximized when marginal revenue equals marginal cost. Again, however, if opportunity cost is understood, students can be introduced to the idea of marginal values in the familiar context of their personal expenditures, where they are all probably exhibiting profit maximizing behaviors without being aware of it. Once marginal values are understood, the profit maximizing behavior of a firm is much easier to understand, and even "average" students will be able both to find the quantity that will maximize a given firm's profit and to explain why the firm will attempt to produce at that price and quantity.

Learning hurdles classified as ***semantic/linguistic*** occur as students approach seemingly familiar words like "demand," "profit," and "scarcity," only to find that they don't have quite the same meaning in economics that they have in ordinary usage. This is most troublesome when the distinction between the economic usage and common usage of a term is subtle. Such semantic difficulty is exemplified by the term "scarcity," which is discussed in detail later.

Students also have trouble with the term "profit." In everyday parlance, profit is the difference between total sales revenues and total cost of goods sold. The economic definition of profit is somewhat different, roughly dividing the layman's concept into two components: normal and economic profits. Normal profit is a cost of production; it is essentially the opportunity interest cost of the firm's investment, without which the owner wouldn't earn enough income to stay in business. Economic profit is profit in excess of normal profit.

Another example is the term "demand," which is commonly used to mean "to ask for urgently," "adamantly desire," or "insist upon." In economics, demand expresses a relationship between the amount of something that is desired or requested and the amount that must be sacrificed to obtain it; ***it is desire backed by willingness and ability to pay***. The word "investment" also causes confusion. It is commonly used to mean the placement of money into a money market fund or other interest earning account, rather than to mean, as economists do, the purchase of productive resources. It is truly amazing how many learning hurdles are encountered by youngsters due to the disparity between everyday usage of words and their acceptable usage in the vocabulary of economists.

Finally, because everyone participates in the economy in one way or another, there is a great deal of popular wisdom about how the economy works. Unfortunately, much of this wisdom misses the mark. By the time students get to high school, they have absorbed many of these mixed-up or mistaken ideas and have trouble replacing them. For example, many students think they are being brainwashed when they learn that it is consumers, not business owners, who ultimately have sovereignty over what is produced in a market economy. They have always heard that firms—and only firms—decide what to produce. Students also tend to think that scarcity exists because people are greedy. They have trouble accepting the idea that a good use of resources in an exchange economy ends up being a profitable use of resources, whereas a good use of resources in a centrally planned economy is whatever the planners determine it to be. They think there should be some ethical or scientific basis for determining what a really good use of resources is.

Another common belief of students (and many of their parents) is that if you've invested a lot of effort or money in a project, you should finish it, no matter what. They are reluctant to believe that if it costs more just to finish the project than the project will ever earn, it shouldn't be finished, no matter how much it has already cost. These preconceived notions of how economics works produce ***attitudinal*** blocks that considerably impede the students' ability to understand many economic concepts.

In the next section of this chapter, ten of the most prevalent learning hurdles encountered in each of the curricular units outlined above will be identified and discussed. Their prevalence has been determined through careful analysis of the daily logs submitted by 127 teachers of economics and an item analysis of misinformation revealed by true/false/justify your answer examinations of their students.

TEN SPECIFIC LEARNING HURDLES ASSOCIATED WITH CONCEPTS IN THE ECONOMICS CURRICULUM

Unit I:
The Function of Economic Systems:
Deciding What, How, and For Whom to Produce

LEARNING HURDLE #1:
Scarcity as a Relative Concept - *Analytical*

Recall that scarcity occurs because the earth's resources are limited, yet human wants are not limited. A good is scarce when there is too little of it available to serve all the uses for which people want it. Students have two problems with the concept. The first occurs because the word scarce is commonly (and correctly) used to mean rare (infrequently found). Hence students quite reasonably think that if there are ten iguana eggs in the world, and 50 tons of copper ore, iguana eggs are scarce, because they are few in number, and copper ore is plentiful. But economists employ a definition of scarcity that has nothing to do with absolute quantities. Students often fail to comprehend that scarcity is a relationship; specifically, an item is scarce if its availability is low relative to the desire for it. If no one has any use for iguana eggs, economists would say that ten of them is plenty; and if people would like to have 150 tons of copper ore for use in various projects, but only 50 tons of ore are available, then copper ore is scarce.

Once students appreciate the relative nature of scarcity, they sometimes run into a second ***attitudinal*** difficulty because they associate it causally with greed. If scarcity is defined by wanting more than we can have, they reason, it could be eliminated by simply curbing our wants. Theoretically, this is true: if wealthy individuals suddenly stopped wanting to accumulate more wealth and starving individuals suddenly stopped wanting to have more food, economic scarcity would as peremptorily disappear. Empirically, however, there is no support for the idea that people will behave this way. In spite of religious and other sorts of encouragement to curtail our material wants, we keep wanting things. Although there are some primitive societies in which scarcity does not seem to be a problem, because members work together and seem to have adequate shelter and enough to eat, this does not occur because the people are unusually altruistic. Rather, what we observe is the result of generations of responding to the fact of scarcity. Such societies have figured out how to squeeze every conceivable bit of comfort from available resources and know from experience that no change in behavior will yield greater wealth. Members don't sit around wanting computers any more than we sit around wanting unicorns. However, should someone drop a foreign object, such as a "Coke" bottle, into such a community, tranquillity would be over for a while as individuals found myriad wonderful uses for it and fought over it. Have students see and analyze this situation in the movie, *The Gods Must Be Crazy*.

Unit II:
A Closer Look at the Free Market System

LEARNING HURDLE #2

Change in Demand versus Movement Along A Demand Curve -
Semantic, Analytical

A common error is the tendency to use the word demand to mean quantity demanded, e.g., "Demand increased when the price fell." Students and their teachers must be able to distinguish between the two distinct concepts.

DEMAND: Many factors influence the placement and curvature of a demand curve (incomes of consumers and people's tastes, for example); a change in any of these will occasion a change in demand. This is represented by a shift of the demand curve. Specifically, increases in demand shift the demand curve rightward; decreases leftward. On a demand schedule, an increase in demand means that, at every original price, more of the good will be purchased than before; a decrease would mean that less would be purchased at every price. Hence, a change in demand requires that the entire set of quantities on the old demand schedule be replaced by a new set that is either larger or smaller than the original set.

QUANTITY DEMANDED: A change in the quantity demanded is simpler; it's just the law of demand in action. If the price of a good rises, the quantity purchased ***(quantity demanded)*** will decrease, and if the price falls, the quantity demanded will increase. Note here that both price and quantity are changing. A change in the quantity demanded of a good is always a response to a change in price of the good. A change in the quantity demanded is represented by movement along a demand curve (note that there is no shift in the demand curve itself), or by movement to a new row in a demand schedule. The concepts are confusing because in both cases, the quantity purchased changes. The difference is that a change in quantity demanded is exclusively a price response, whereas a change in demand may be attributed to any of a variety of causes.

LEARNING HURDLE #3

Graphing Changes (Shifts) in Demand and Supply - *Analytical*

Perhaps because we speak of demand as rising (or going up), students are comfortable with graphs of increases in demand, because the curve showing the increase seems to float over the old curve. Students should be warned right away to see this movement as rightward rather than upward, otherwise they will be tempted to incorrectly shift supply curves upward to show an increase in supply. When supply increases, the new curve graphs to the right of the original curve. Students with an up/down orientation will see this new curve as being beneath the original curve and are likely to interpret it to mean that supply went down. Encourage students to see the shifts as rightward and leftward. An increase in supply shows up on the graph as a rightward shift of the supply curve, and an increase of demand is shown as a rightward shift of the demand curve. Similarly, decreases are leftward shifts for both curves.

LEARNING HURDLE #4

Opportunity Cost - *Analytical*

It is fairly easy to conceptualize the opportunity cost of the following decision: Mary chooses whether to go to Movie A, her favorite, which costs $5.00, or to Movie B, which costs $4.00 and leaves $1.00 to purchase some popcorn. She decides to go to Movie A. Her opportunity cost is Movie B plus a $1.00-size popcorn. But what if Mary is choosing between Movie A, Movie B plus popcorn, and Movie C—which costs $3.50 and leaves her $1.50 for goodies? If she still chooses Movie A, is her opportunity cost now Movie B plus popcorn and Movie C plus goodies? No. Mary can think of a thousand ways to spend her $5.00, but the opportunity cost of going to Movie A is not therefore the value to Mary of a thousand things. Rather, it is the value to Mary of the thing she would have purchased if she had not spent the $5.00 on Movie A. Opportunity cost is the value of an individual's second choice, not the summed value of all the choices that individual might have made.

LEARNING HURDLE #5

The Role of Profit: Normal vs. Economic Profits - *Semantic/Analytical*

The usual notion of profit is simply revenues minus costs. An accountant hired by the owners of a Mom & Pop store would count the prices paid for the mortgage, utilities, and inventory as Mom & Pop's costs, and subtract these from their net sales receipts (revenues) to arrive at a profit figure. Economic profit is usually quite different from this accounting profit: it is accounting profit minus something economists call ***normal*** profit. There are some new terms here, but there are no new concepts. The distinction between economic profit and accounting profit arises because economists count all opportunity costs as business costs, but accountants (for historical reasons) neglect those not explicitly contracted and paid for.

Suppose the accountant for the Mom & Pop store above determines that their profit is $30,000. Unless there is something unusual about Mom & Pop, most economists would say that the $30,000 of accounting profit is not a profit in the economic sense because it is no more than the opportunity cost of Mom & Pop's labor. This opportunity cost, not traditionally counted by accountants, is equal to the amount Mom & Pop could have earned working for someone else. Economists also refer to this figure as "normal" profit.

Suppose that a second store, Mom & Pop II, earns accounting profits of $60,000. If the original Mom & Pop are still earning only $30,000, does this mean that the extra $30,000 earned by the owners of Mom & Pop II is economic profit? It depends. The answer is no if Mom and Pop II can earn $30,000 each ($60,000 together) by working as marketing representatives for a corporation. That is, if the only reason that Mom & Pop II earn $30,000 more than the first Mom & Pop is because their marketing skills are better, they are still only earning normal profits, since those skills would also be more highly valued (and rewarded) by other employers. If, on the other hand, each could be earning $100,000 as a top corporate executive, they suffer an economic loss of $140,000, which is the difference between the $60,000 that they earn and the $200,000 that they could have earned. The third possibility is that they are every bit as ordinary as the original couple, and that their next best alternative—no better than the original Mom & Pop's—is to earn $15,000 apiece in retail sales somewhere. In this case, the extra $30,000 certainly is an economic profit, and every entrepreneur in the area will want to know how they were able to earn it. Perhaps Mom & Pop II have exclusive rights to sell a product that the locals believe is an effective aphrodisiac.

Economic profits are therefore profits in excess of normal profits, and, predictably, are harder to come by. Something special is always required. The special thing that enables monopolists to earn economic profits is their exclusive right (or ability) to produce some desirable commodity. For example, opera tenor Luciano Pavarotti earns a much greater income than Pop II earns because he has a monopoly over a very scarce and highly valued resource—his own voice. Economic profits also may result when a very risky investment turns out well, or when demand for a new good is so much greater than supply that the clearing price is quite high relative to the cost of producing the good.

Economists find it useful to distinguish economic profits from accounting profits, because the existence of economic profits always signals that change is occurring, perhaps a change in people's tastes, a change in the use of resources, or a change in the distribution of wealth.

LEARNING HURDLE #6

Graphical Depiction of Price Ceilings and Floors - *Attitudinal/Semantic*

Price ceilings and price floors tend to be confusing when they are graphed because ceilings are drawn ***below*** the equilibrium price, and floors are drawn ***above*** the equilibrium price. This confuses students, who cannot understand why a price floor should be positioned directly over a price ceiling. It is helpful to graph them separately.

In the case of a price ceiling, start by drawing supply and demand curves ***(see Figure 2-1).*** Choose an arbitrary price below the equilibrium price, then extend a dotted line from this price across the supply and demand curves to show that producers are willing to supply less at this price than consumers want to purchase. The resulting excess demand tells suppliers that they can raise the price of their product. When they do, they will also want to produce more; consumers simultaneously will want to purchase less.

Illustrate on a second graph, ***(see Figure 2-2)*** that

Figure 2-1
Price Ceiling With Large Excess Demand

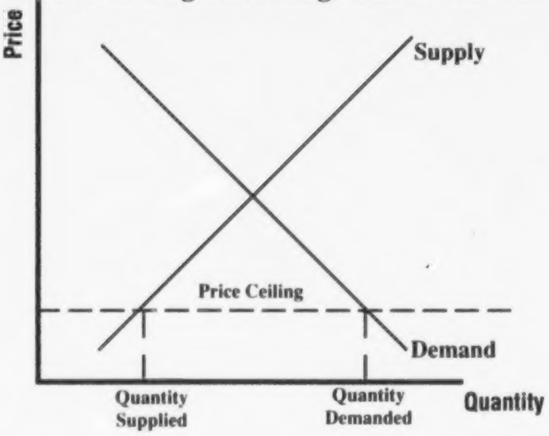
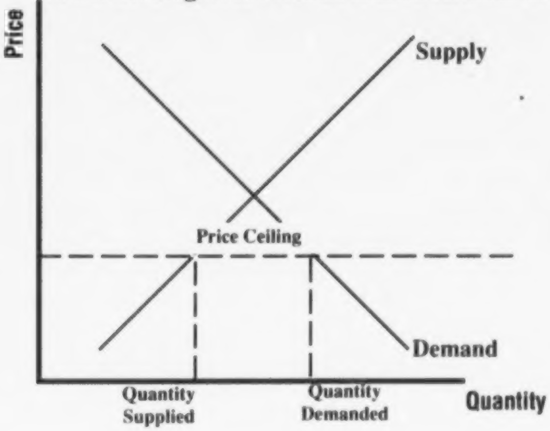


Figure 2-2
Price Ceiling With Small Excess Demand



the higher price reduces excess demand. Show that in the absence of any interference, upward pressure on price and quantity leads to equilibrium.

Use the first graph to draw in a price ceiling that intersects both supply and demand curves as in figure 2-1 and explain that it is called a ceiling because it is as "high" as the price is allowed to go. Show that the excess demand, formerly temporary, becomes a shortage lasting for the duration of the price-fixing legislation. The same procedure may be followed, in the reverse direction, for price floors.

Unit III:
Firm Behavior and Different Types of Market Structures

LEARNING HURDLE #7
Sunk Cost - *Analytical/Attitudinal*

Students have trouble with the idea that a cost can be irrelevant. It seems too contrary to common sense. They have all heard of business people who say they "can't afford to sell below cost," and of people who doggedly persevere at something to "make it worth the investment." The following examples may help to dispel these ideas.

If Mr. and Mrs. Darling pay $20 for theatre tickets and then sit through the entire performance of a disastrous play "to get their money's worth," they are only adding to their woes. Since the $20 is irretrievable, their opportunity cost of exiting the play is zero. Their opportunity cost of staying is not zero, however, since by staying they give up the enjoyment from spending the next two hours in some more pleasant activity.

As another example, suppose that Mr. Smart buys a load of 1,000 back scratchers at a bargain for $200 (20 cents apiece), believing he can sell them for 50 cents apiece and make $300. However, no one will buy them for 50 cents. No one will even buy them for 30 cents. What is the lowest price Mr. Smart should charge? The answer is not "20 cents per back scratcher, because Mr. Smart should not sell below cost." If Mr. Smart charges 20 cents and still no one buys, he makes no sales, and the amount he may add to his revenue is $0. Suppose the highest price he can get for them is 10 cents each. If he sells at that price, the sale would add $100 to revenue. This is not selling "below cost." Mr. Smart incurred all losses from his purchase of the back scratchers at the moment he purchased them. The $200 is a sunk cost; he can't unspend it. The relevant cost of selling the back scratchers is zero. If the best price he can get is a penny, he should sell at that price. In fact, he should give them away if his best alternative is to pay someone to remove them from his premises!

Unit IV:
Money and the Banking System

LEARNING HURDLE #8
The Interest Rate - *Analytical/Attitudinal*

Many students have trouble conceptualizing interest rates–their very existence seems spurious. The most intuitive way to justify the existence of interest rates is to ask students whether they would rather have $1,000 today or a promise (from someone who is completely trustworthy) of $1,000 one year from now. Most of them will prefer to have the money today. Then ask if they would prefer $1,000 today, or a promise of $1,100 in one year. Some of them will prefer to wait for the larger sum. Explain that this is essentially what happens between a borrower and a lender. The borrower asks the lender to give up the use of, say, $1,000 today in exchange for the promise of $1,100 one year from today. Note that the extra $100 is interest; it is a premium that must be paid to people in order to induce them to postpone consumption.

The students who were induced to lend (defer consumption) by the promise of an extra $100 implicitly were charging a 10% interest rate to the borrower. Other students may not be induced to be lenders for less than 20%. This may be because these students think the investment is risky (perhaps they don't trust the borrower), or perhaps they simply have a stronger preference for present consumption than their peers. Economists would say that their time rate of preference is higher. Spendthrifts typically have very high time rates of preference, and penny—pinchers have low time rates of preference. People's time rates of preference vary as widely as their other preferences do.

People prefer present consumption over future consumption for various reasons, but the most compelling one is the uncertainty of life itself—they may not be alive to receive the $1,000 next year. People don't like uncertainty. Therefore, as uncertainty increases, so does the interest rate. The riskier is the investment, the higher is the interest rate required to attract lenders. It is fun to think of uncertainty as an undesirable commodity and ask what demand for such a commodity would look like. One might suspect that it behaves just the opposite from demand for "good" things, and so it does—demand for "bads" slopes upward. People have to be paid to consume more of something that is undesirable, and if they are being asked to increase their consumption further, they must be paid a higher price. When the bad thing is uncertainty, the price paid is the interest rate.

All of this presupposes that a society can afford to pay this price. It turns out that, in order for borrowing and lending to occur at all, a society must be technologically capable of growth. If there are no opportunities for increasing society's wealth beyond the level of subsistence—that is, if there is no hope that life will be better in the future as a result of present investment—then there are no advantages to deferring present consumption. And if there are no advantages to deferring consumption, then the society's implicit interest rate is zero, and no one will be induced to invest in the future, either as a borrower or a lender.

This material is relatively abstract. Students may be put somewhat at ease if they are shown the rather familial purpose that is served by much borrowing and lending. Lending requires there be members in the society with enough present wealth to lend to someone else; the lender must also have enough confidence in the future to be persuaded that the borrower's use of the funds will yield a return large enough to repay the loan with interest. Similarly, no one will borrow unless he or she has an opportunity for investment with an expected return large enough to repay the lender with interest. Because of these characteristics, borrowing and lending activity tends to follow a predictable pattern in many societies. Older members of society have had time to accumulate wealth to lend and typically are more interested in present consumption than are younger members of the society. Hence they are induced by the interest incomes they can earn (and spend on present consumption) to lend part of their accumulated wealth. Younger members typically have greater opportunities for increasing their wealth by deferring consumption (for example, by going to school to become professionals) than older people do, and often lack present wealth. They are therefore the main borrowers in a society. In this way, lending and borrowing tend to even out people's ability to enjoy present consumption across generations.

Unit V:
National Income and Principles of International Trade

LEARNING HURDLE #9

The Circular Flow of Income: Consumption vs. Investment Spending - ***Semantic***

Because most students are more familiar with the role of consumer than with the role of firm owners, they have a relatively easy time understanding what consumption is. On the other hand, they tend to think investment amounts to putting money in the bank to earn interest.

Consumption expenditures are expenditures on finished goods (consumption goods). Consumption goods emerge at the end of productive efforts and are defined by what happens to them: they are purchased for personal use by individual consumers. Investment expenditures are expenditures on goods used in production (investment goods), and are also defined by what happens to them: they are used to produce other goods (both consumption goods and investment goods). Investment goods thus include intermediate products. For example, rebar is an investment good of this type. Since it has already been produced (from steel) and since it is not a finished good (the building in which the rebar is used will be the finished good), rebar is an intermediate good. It is an investment good because it will be purchased for use in construction.

Certain goods nevertheless seem to defy classification. For example, automobiles are certainly consumption goods, but aren't they also investment goods—especially for travelling salesmen? Technically, they are investment goods for travelling salesmen, but in the computation of Gross National Product (GNP) they are traditionally classified as consumption goods anyway. Pickup trucks are also consumption goods, but semi trucks are investment goods. A good rule of thumb is to classify a commodity according to how it is most commonly used. If a commodity is most commonly purchased for personal use, it should be classified as a consumption good; if it is usually purchased for use in production, it is probably an investment good.

LEARNING HURDLE #10

International Trade: Comparative Advantage—Relative vs. Absolute Productivity - ***Analytical***

Students have difficulty comprehending that one individual who can outperform another individual in every way may nevertheless be able to work out an advantageous exchange with the less competent person. They need to be shown that although the efficient person may be absolutely superior at everything, the less efficient person may be able to perform relatively better at some particular thing, and that therein lies the potential for advantageous exchange.

It is perhaps best to introduce the idea with an example that does not involve negotiating a trade. For example: ***Ask whether there could ever be a situation in which a law firm that pays $8.00 an hour for typing services would hire Michael, who types 50 wpm, instead of Jerry, who types 100 wpm.*** Given that the firm pays by the hour rather than by the page, it clearly gets a bargain by hiring Jerry. If, however, Jerry is also a lawyer whose services can be billed at $200 an hour, the firm would make sure Michael did all the typing. Jerry's services as a typist are more valuable than Michael's, but Jerry is even more valuable as a lawyer than as a typist. Jerry's ***comparative advantage*** is as a lawyer.

With the seed planted, proceed to advantages of trade. Suppose every Saturday afternoon, Cindy and Ashley mow their lawns and weed their gardens (of identical size), and suppose that Ashley is faster at both mowing and weeding. Is it possible for one (or both) of them to finish earlier if they engage in a little trade?

ASHLEY'S TIME	
1 lawn	40 minutes
1 garden	80 minutes
Total Time =	**120 minutes**

CINDY'S TIME	
1 lawn	120 minutes
1 garden	100 minutes
Total Time =	**220 minutes**

Suppose that Ashley gave up all weeding and confined her yardwork to mowing first her own lawn, and then Cindy's. She would then finish all yardwork in just 80 minutes, saving 40 minutes. If Cindy meanwhile weeded both gardens, she would be working only 200 minutes instead of 220. Both have gained from trade. This can occur because each has specialized in the activity in which she is relatively more proficient—the activity in which she has a comparative advantage.

Students resist this even after seeing it, because they're being asked to believe that Cindy is somehow faster at weeding a garden even though it clearly takes her longer to weed a garden than it takes Ashley. Emphasize that the relevant question is not how many gardens can be weeded per hour, but how many gardens can be weeded per lawn mowing foregone. Even though Cindy takes 100 minutes to weed a garden, she is relatively better at weeding gardens because she can weed a garden faster than she can mow a lawn. By contrast, although Ashley can weed a garden in 80 minutes, it takes her twice as long to weed a garden as it takes her to mow a lawn. It's only if we think in terms of minutes that Ashley is faster at both; if we think in terms of gardens weeded per lawn mowed, Cindy is faster at weeding and Ashley is faster at mowing.

California
State Department
of Education
and the
California Council
on
Economic Education

Chapter 4

Replacing a Thermometer with a Thermostat:

A Model for Assessment of Classroom Learning in Economics

Dr. Marilyn Kourilsky
California Council on Economic Education

Dr. James Bruno
University of California at Los Angeles

Evaluating the effectiveness of instruction is a major responsibility of a classroom teacher. The economics teacher is particularly challenged in this regard since a great deal of misinformation can enter the student knowledge base via popular news media and other school classes. This chapter examines some new and interesting options open to teachers to help fine tune your curriculum to the precise information needs of your students.

Evaluating the effectiveness of instruction is a major professional responsibility of classroom teachers. The economics education teacher is particularly challenged in this regard, since a great deal of misinformation can enter the student knowledge base in economics via the popular news media and other school classes. This chapter examines the types of evaluation of classroom instructional protocols that are available to economics education teachers. Each technique offers distinct advantages and disadvantages in terms of cost and quality of relevant instructional feedback to teachers and students. One particular format of testing called Information Referenced Testing (IRT) is examined as a "thermostat" for the classroom assessment of instruction. IRT permits teachers to fine tune economics curricula to the precise information needs of students by examining the quality of the signal of instruction (teaching) as well as the reception of instruction (learning). The procedure is illustrated for two contexts: multiple sections of high school economics classes taught by a single teacher and inservice programs for economic education teachers.

Introduction

> ***"He who knows and knows that he knows,***
> ***He is wise, follow him.*** *(informed)*
>
> ***He who knows and knows not that he knows,***
> ***He is asleep, awaken him.*** *(partially informed)*
>
> ***He who knows not and knows not that he knows not,***
> ***He is a fool, shun him.*** *(misinformed)*
>
> ***He who knows not and knows that he knows not,***
> ***He is a child, teach him."*** *(uninformed)*
>
> *(Arab Proverb in Sibley, 1973)*

The above proverb neatly defines the complex professional challenge facing teachers of economics. Misinformation from the popular news media enters the information base of many students of economics. Such misinformation ranges from the belief that all banks create money out of thin air to the notion that the Federal Reserve System is another name for the National Guard. Teachers have to systematically purge this misinformation and replace it with relevant and reliable information. How to evaluate the effectiveness of these instructional efforts presents a unique set of opportunities for the economics teacher and is the principal focus of this discussion.

Among the major issues that have to be addressed in instructional assessment are to define precisely: (1) the subject matter, (2) the concepts that are "fundamental" to the subject, (3) the test items or questions that best represent these concepts, and (4) how the teacher wants to evaluate the student (scoring systems). This last question is our central concern here: the nature of the evaluation in so far as it takes into account the teacher's relative workload and the nature of the response restrictions placed on the student.

If, for example, a teacher has a five class instructional load (150 students), the assessment function could be enormously time-consuming. Thus the relative workload of the teacher is a vital consideration when deciding on an assessment protocol.

Once test items are determined, a teacher must examine the restrictions placed on the student in answering the questions. Will the assessment be subjective in nature (open response - evaluation dependent on teacher input) or objective (limited response - evaluation without teacher input)? Psychometric concerns of test reliability, validity, and scoring bias all play a role in deciding the form of response restrictions.

Essay exams tend to be both time-consuming for the teacher to grade and subject to bias (handwriting, spelling, grammar, first exam graded, last exam graded, etc.). The extent of "external" bias in grading essays greatly limits their usefulness in the economics education classroom, as does the amount of time necessary to evaluate them. On the positive side, essay exams place the least restriction on student responses. Short answer type questions are somewhat less time-consuming for the teacher to grade but also make it more difficult to evaluate the precision of student responses.

In the interest of maintaining objectivity and reducing grading time, many teachers base part of their assessment on the results of right or wrong (R-W) scored multiple choice tests. However, if a teacher chooses a multiple choice test format scored with a right-wrong test scoring procedure, the teacher has to be cognizant of guessing, especially by the marginal student. Although this form of assessment is extremely popular with teachers because of ease of scoring and amenability to computer-generated reports, it has been criticized by educational researchers since it first became widely used. According to Coombs, Millholland and Womer (1956),

> ***The inability of conventional methods, [i.e., (R-W) scored multiple choice tests], to discriminate between partial information and complete information or misinformation is as significant a disadvantage as is their encouragement of guessing.***

Other researchers have voiced similar concerns:

> ***Hardly ever is the student asked about the certainty of his knowledge. That the involvement of certitude of knowledge is worthy of consideration cannot be denied, but it is doubtful that the full significance of certitude of knowledge will ever show up in experimentation unless the measurement of it becomes more common in the classroom at all levels of education.*** (Dressel & Schmid. 1953, p. 595).

Because of recently developed microcomputer technology, along with sophisticated test scoring software and optical scanning equipment, scoring systems other than right-wrong are now in a position to be evaluated for possible use by classroom teachers. The ideal assessment procedure should be objective, award partial credit, provide detailed feedback for formative and summative evaluation and, most importantly, evaluate both the instructional signal as ***delivered*** and the instructional signal as ***received***. The procedure should also be amenable to pre-post test type designs and provide both intra- and inter-class instructional feedback. Finally, the procedure should be heavily supported by computer technology so that no additional workload is placed on the teacher.

Information Referenced Testing

With R-W test scoring a student is evaluated as being either "correct" or "not correct." R-W scoring systems, since they are one-dimensional in nature, cannot assess an ***incorrect*** answer, only a ***not correct*** answer. Note the distinction between not correct and incorrect, which the following example will serve to illustrate:

EXAMPLE 1

1/2 + 1/3 = *A.. 2/5*
B. 5/6
C. None of the above

One-Dimensional Response Assessment

Student answers "B" ....Correct

Student guesses "B" ....Correct

Student answers "A" or "C" ....Not correct

Student guesses "A" or "C" ....Not correct

The possibility of a student making "correct" choices through guessing is not taken into account in the R-W test-scoring model, since it is based on a one-dimensional (recognition) model. A more precise scoring system would be two-dimensional in nature, allowing for measures of confidence as well as measures of recognition.

EXAMPLE 1 *(Same Question)*

Two-Dimensional Response Assessment

Student is sure that the answer is "B." .... Informed

Student thinks the answer is "B." .... Part informed

Student does not know the answer, or has not been taught. .... Uninformed

Student is sure that the answer is "A" or "C" .... Misinformed

The above two-dimensional framework for assessment can be expanded to concepts in economics. A common question examining the concept of demand is:

EXAMPLE 2

The concept of demand refers to:

- ***a.*** ***the amount of a good or service individuals would be willing to buy at alternative prices in a given time period.***
- ***b.*** ***how many individuals would be willing to buy a good or service at alternative prices in a given time period.***
- ***c.*** ***the amount of a good or service individuals have bought at alternative prices in all time periods.***

Two-Dimensional Response Assessment

Student is sure that the answer is "(a)" .... Informed

Student thinks the answer is "(a)" .... Part informed

Student does not know the answer, or has not been taught. .... Uninformed

Student thinks is sure that the answer is "(b)" or "(c)." .... Misinformed

Recently a two-dimensional, computer-based optically-scannable test scoring procedure has been developed at UCLA and has been applied in a variety of educational settings (see Bruno (1988) for applications of the audit concept in urban schools, and Albedi (1988) and Albedi and Bruno (1989) for an analysis of the psychometric properties of IRT). Information Referenced Testing (IRT) is designed around a unique test scoring system that permits and makes it in the students' best interest (for making points) to respond, "I know," or "I don't know or haven't been taught," or "I am not sure." A student is given 30 points for an answer that is sure and correct (informed), but loses 100 points for an answer that is sure and incorrect (misinformed). If a student indicates no information or is uninformed, the student neither gains nor loses points. Finally, if a student is partially sure and can successfully eliminate one of the incorrect choices to a test item, the student can gain 10 points (partial credit). This simplified procedure called Modified Confidence Weighted - Admissible Probability Measurement (MMCW-APM) is derived from the "triangle" version of the scoring system called MCW-APM which is in turn derived from the more generic APM.[1]

---

[1] Modified Confidence Weighted-Admissible Probability Measurement or MCW-APM is a modification that is derived from the more generic APM (Admissible Probability Measurement) type testing. The Rand Corporation in the early 1970's provided much of the theoretical research into this type of information based on APM testing (Brown, 1970; Brown & Shuford, 1973; Sibley, 1973; Shuford, Albert, & Messingale, 1966; Bruno & Shuford, 1973). Recent research in MCW-APM test scoring includes applications to policy-legal issues (Bruno & Hogan, 1985), below grade level students (Bruno, 1986), instructional audits (Bruno, 1988), special action admissions (Bruno, 1988) and test-retest reliability.

The Search for a Thermostat

One important advantage to the teacher of the above described technology based, two-dimensional approach to classroom assessment is its availability as a ***thermostat***—with detailed feedback to the instructional program, rather than a ***thermometer*** —a reading of student performance with no feedback. In a thermostat approach to classroom assessment, detailed feedback should be available on the individual (the reception), on the individual classroom (the signal, from the teacher), and for multiple classroom comparison.

To illustrate the "thermostat" qualities of the information referenced testing approach, consider the following types of feedback given to a teacher with five sections of economics. The analysis is based on a pre-post assessment of economic understanding as measured by the Test of Economic Literacy (Joint Council on Economic Education, 1988), although any other instrument could have been used.

The Student (Receptor). In evaluating classroom instruction, the student should be considered as the centerpiece for evaluation. The notion of a thermostat for classroom evaluation implies detailed feedback to the student for formative evaluation as well as summative evaluation. The results of a student's performance can be expressed in the form of an Individually-prescribed Education Plan (IEP) which can be addressed with peer tutoring, cooperative learning, or individual instruction. The student IEP lists the specific areas of misinformation, lack of information, and partial information (by instructional concept with cross references) for the student.

The Class (Signal). Corresponding to feedback provided to students using Information Referenced Testing (IRT) is feedback for the classroom teacher regarding the quality of the signal. Clustering the individual IEP's in a class yields a class information profile. This analysis details for the teacher common concept areas of misinformation, lack of information, and partial information for a specific economics class. This information allows the teacher to use the above profile to fine-tune the curriculum to address the specific information needs of the class.

Multiple Classes. Since teachers commonly instruct several sections of the same economics course, a composite profile across all classes can be produced for the teacher. This aggregate schoolwide analysis can be useful for designing supplementary instructional materials in economics, which might be applicable across all courses. An additional IRT analysis examines how each concept is distributed across classrooms and how the information profiles of each classroom compare to each other.

Pre and Post Test Changes. Finally, teachers can examine in a pre-post test fashion if there are significant positive changes in the levels of reliable information (accurate and confident) received by students across all classes from the beginning to the end of an instructional sequence. Usually the baseline measure of information is the pre-test, with the posttest administered at the conclusion of the course or instructional sequence. The information changes between the baseline and final information profiles can be used to evaluate a teacher's overall teaching effectiveness.

The Use of IRT in Staff Development

Not only is IRT useful for assessing high school students' knowledge of economics, but also it is especially applicable in staff development for economics education teachers who themselves have misinformation or lack information in certain concept areas.

The California Council on Economic Education has conducted several state-wide teacher training seminars and has effectively employed IRT to address the specific needs of individual teachers (Kourilsky & Bruno, 1989).

For example, one pre-test of these teachers showed that only 20% of the teachers had achieved full mastery of basic economics (reliable and confident information). The instructional goal for the staff development program for those teachers was to enrich their economic understanding (since they were already well-informed) and to role-model alternative pedagogical techniques that they could use with their own students.

Forty-three percent of the teachers had not achieved mastery. Most were partially informed, and a few more were uninformed. The primary instructional goal for the non-mastery group (unreliable or unstable information) was to fill in gaps and purge misinformation in their basic economic understanding. Much basic instruction and re-education in economics were needed.

Thirty-seven percent of the teachers were also found to have substantial misinformation in their knowledge base. Re-education was needed by these teachers in a number of concept areas. The major instructional challenge for this group was to correct the misconceptions of the misinformed so that they would not pass on these misconceptions to a new generation of learners—their high school students. These teachers were given instructional information remedies that were designed to "purge" the misconceptions that led to the misinformation.

Systematically addressing the specific information needs of different teachers in a proactive and affirmative manner was the main objective of the staff development program. The post test results of the teachers after staff development revealed a high level of economic literacy. Eighty-four percent of the teachers were fully informed at the conclusion of the program, whereas only one percent fell into the category of the uninformed (Kourilsky & Bruno, 1989).

Summary and Conclusion

In sum, the type of assessment instrumentation an economics teacher uses in the classroom to evaluate the success of teaching should be determined by both the intent of the evaluation and the time-resource-effort needed by the teacher to conduct the evaluation.

The intent of the evaluation should be not only to evaluate teaching but also to provide detailed formative and summative evaluation feedback for both the teacher (signal) and the student (reception). If the teacher has multiple sections of the same course, an additional analysis of each course and an analysis across all classes might also be needed.

The time-resource-effort required by teachers to satisfy the intent of the evaluation should be designed to be minimal. A technology based optically scannable procedure can significantly reduce teacher clerical efforts and teacher scoring time.

One method of addressing the above two concerns, called information referenced testing (IRT), was provided as an illustration of what might be accomplished with a technology based assessment procedure. IRT provides a detailed evaluation of instructional effectiveness with a minimal use of time-resource-effort. It should be noted that other more subjective measures can also be used by the classroom teacher in conjunction with objective measures to triangulate on both student performance and teacher performance. The core concept of this discussion is that of a "thermostat" in classroom evaluation, i.e., detailed relevant feedback to enhance the quality of the instructional program.

The economics classroom teacher should choose the evaluation instrumentation that is most comfortable, least time-consuming, and most appropriate in terms of desired instructional feedback. Technology based assessments, such as IRT, satisfy all these criteria.

References

Albedi, J. (1988). *Response structure and reliability of MCW-APM*. Paper to be presented at the American Education Association annual meeting, New Orleans.

Albedi, J. & Bruno, J.E. (1989). Test-retest reliability of computer based MCW-APM test scoring methods. *Journal of Computer Based Instruction, 16(1)*, 29-35.

Brown, T.A. (1970, June). *Probabilistic forecasts and reproducing scoring systems* (Research Rep. No. RM-629-ARPA) Santa Monica: The Rand Corporation.

Brown, T.A., & Shuford, H.E., Jr. (1973). *Quantifying uncertainty into numerical probabilities for the reporting of intelligence* (Research Rep. No. R-1185-ARPA). Santa Monica: The Rand Corporation.

Bruno, J.E. (1988). The Instructional Audit in Urban School Settings. *Urban Review*, 20(2), 95-107.

Bruno, J.E., & Shuford, Jr., E.H. (1977). *Problems in the evaluation of inner-city instructional programs: Implications for Title III*. Santa Monica: The Rand Corporation.

Coombs, C.M., Milholland, J.E., & Womer, F.B. (1956). The assessment of partial knowledge. *Educational and Psychological Measurement, 16*, 13-37.

Dressel, P.L., & Schmid, J. (1953). Some modifications of the multiple choice item. *Educational and Psychological Measurement, 18*, 574-595.

Kourilsky, M., & Bruno, J. (1988). Implementing Mandates in Economics: A Model and Diagnostic Protocol for Teacher Training.

Shuford, H.E., Jr., Albert, A., & Messengill, H.E. (1966). Admissible probability measurement procedures. *Psychometrika, 31*, 125-145.

Sibley, W.L. (1973). *A prototype computer program for interactive computer-administered admissible probability measurement* (Research Rep. No. R-I258-ARPA). Santa Monica: The Rand Corporation.

California
State Department
of Education
and the
California Council
on
Economic Education

Appendix

Resources and Materials in Economic Education

Dr. Robert Harris
California State Department of Education

There are many classroom materials available for the high school economics course, provided by a variety of economic education organizations. This appendix provides a list of selected resources that can help teachers avoid "reinventing the wheel" in developing classes. It does not attempt to provide a comprehensive bibliography of teaching aids in economics; rather, it provides a survival kit of basic materials and organizations that can facilitate the teaching of high school economics.

There are many classroom materials available for the high school economics course, provided by a variety of economic education organizations. This chapter provides a list of selected resources that can help teachers (and school districts) avoid "reinventing the wheel" in developing classes to meet the graduation requirement in economics. It does not attempt to provide a comprehensive bibliography of teaching aids in economics; rather, it provides a survival kit of basic materials and organizations that can facilitate the teaching of high school economics.

About the Organizations

The California Council on Economic Education operates as an economic education network through its 23 affiliated Centers for Economic Education at various colleges and universities throughout California. The Centers offer teacher training programs to implement the state-mandated high school economics requirement and provide training and curriculum resources for teachers at all grade levels.

For information, contact:

Dr. John Lafky
California State University, Fullerton
800 North State College Boulevard
Fullerton, CA 92634
Telephone: (714) 773-2248

Foundation for Teaching Economics, based in Davis, California, is a national organization that promotes economics instruction for adolescents in grades 9 through 12. For 15 years, FTE has supported education research, materials development, and the dissemination of texts, videos, and other economics materials that give teachers the tools they need to help young students understand the economy. Its mission is to foster an understanding of the American economic system and the roles individuals play within that system.

For information, contact:

Dr. Gary M. Walton, President
Foundation for Teaching Economics
260 Russell Boulevard, Suite B
Davis, CA 95616
Telephone: (916) 757-4630

The Industry Education Council of California emphasizes comprehensive business, government, labor, and education partnerships to improve employment preparation and career opportunities for California's youth. The IECC works closely with public and private organizations to promote development of a continuous, qualified labor force.

For information, contact:

Dr. Joan Bowen, President
Industry Education Council of California
6000 Stoneridge Mall Road, Suite 330
Pleasanton, CA 94588
Telephone: (415) 460-3200

Junior Achievement reaches over one million students each year in elementary, junior high, and senior high schools nationwide. The purpose and mission of the organization is to provide practical economic education and experience in the competitive private enterprise system through a partnership between business and education. Programs include: Business Basics, for eighth and ninth graders, and Applied Economics, for tenth through twelfth graders. Other programs include the after-school JA Company program, Rural Expansion, and programs for "At Risk" students such as "Project Business: The Economics of Staying in School." All

Junior Achievement programs include curriculum materials and involve participation by the business community. For the JA office in your area, see the list of organizations at the end of this section.

For information, contact:

Dale Baxter, President
Junior Achievement of the Bay Area
Brisbane, CA
Telephone: (415) 468-7420

Economic Education Resources for High School Economics

Curriculum Guides and Related Print Materials:

Banaszak, Ronald A. and Dennis C. Brennan. Teaching Economics: Content and Strategies, Reading, Mass.: Addison-Wesley, 1983. Combines content, methodology, and model lessons.

California State Department of Education (SDE). History-Social Science Framework. Sacramento: SDE, 1988. Includes economic literacy as a K-12 curriculum strand in social studies and outlines a 12th grade capstone economics course designed to meet the state's social studies requirement in economics.

Model Curriculum Standards: Grades Nine Through Twelve. History-Social Science. Sacramento: SDE, 1985. Includes 16 model curriculum standards for economics courses, along with a glossary of key terms.

Davis, James E. Teaching Economics to Young Adolescents: A Research-Based Rationale. San Francisco: Foundation for Teaching Economics, 1987. Provides a research-based rationale for teaching economics to 12-to-15 year-olds, including the recommendations that emerged from a national seminar held in 1985.

Kourilsky, Marilyn. Understanding Economics Overview for Teachers; Experiences for Students. Menlo Park, CA: Addison-Wesley Publishing Co., 1983.

Miller, Steven L. Economic Education for Citizenship. Bloomington, IN: ERIC Clearinghouse for Social Studies/Social Science Education and the Foundation for Teaching Economics, 1988. Describes the role of economic education in the core curriculum for grades K-12.

Morton, John S., et. al. Advanced Placement Instructional Package. Microeconomics/Macroeconomics Teacher Resource Manual, New York: Joint Council on Economic Education, 1988.

Teaching Strategies: High School Economics Courses. New York: Joint Council on Economic Education, 1985. Provides a sample course outline and 22 lessons for a one-semester high school economics course.

Reinke, Robert W., et. al. Capstone: The Nation's High School Economics Course. New York: JCEE, 1989. Provides 58 complete lesson plans in critical thinking and economic reasoning, including 225 reproducible blackline masters.

Saunders, Phillip, et. al. A Framework for Teaching the Basic Concepts, 2nd ed. New York: Joint Council on Economic Education,

1984. Describes the elements of economic understanding and offers concise descriptions of the 22 basic concepts of economics.

Watts, Michael W., et. al. Economics: What and When (Scope and Sequence Guidelines, K-12). Gives a recommended sequence for teaching the basic concepts of economics in grades K-12. Also includes suggestions for assessing student learning and instructional resources, by grade level.

Journals and other Periodicals:

California Network of Economics Teachers. CALNET. San Francisco. Biannual. Provides articles of interest to California's economics teachers, along with information on materials, conferences, and workshops throughout the state.

Council of Economic Advisors. Economic Report of the President. Washington, D. C. Annual. Includes a wealth of national economic statistics.

Joint Council on Economic Education, The Senior Economist. New York. Biannual. Brings key economic issues into the high school or college classroom in economics, government or history.

Joint Economic Committee of the U.S. Congress. Economic Indicators. Washington, D.C.: U.S. GPO. Monthly. Provides a variety of measures of U.S. economic performance.

U.S. Bureau of the Census. Statistical Abstract of the United States. Washington D.C.: U.S. GPO. Annual.

Audiovisual Materials:

Agency for Instructional Technology and the Joint Council on Economic Education. Give & Take. Bloomington, IN: AIT, 1982. Videotape or 16mm. Grades 8-10. Twelve 15-minute programs covering basic economic concepts for classes such as consumer education, economics, business education, home economics, and social studies. A teaching guide provides additional activities and other instructional ideas. A normed test is also available.

Tax Whys: Understanding Taxes. Bloomington, IN: AIT, 1988. High School. Produced by the JCEE and AIT with funding from the Internal Revenue Service. This revised series includes five videotape programs on the effects of taxes from the earlier edition, plus four new programs, transparencies, microcomputer program, student worksheets, teacher's guide, and a workshop manual. A supplement specific to California, Understanding Your State Taxes, is available from the California Franchise Tax Board.

Federal Reserve Bank of San Francisco. The World of Economics. San Francisco: Federal Reserve Bank of San Francisco, 1986. Grades 7-12. Four 15-minute videotapes with matching curriculum materials: (1) "The E-Team," which includes history's outstanding economists; (2) "Wilde About Trade," dealing with international trade; (3) "Mind Over Muffins," covering decision making; and (4) "Money Games," which explains the role of money.

Walt Disney Educational Media. People on Market Street. Los Angeles: Walt Disney Educational Media, 1976. Grades 7-12.

Seven economics films on scarcity, cost, supply & demand, wages & productivity, and property rights and pollution; includes teachers' guides with student activities.

Textbook Lists:

Economics, Grade 10-12: A Listing of Textbooks. Los Angeles: L.A. Unified School District, 1989. Provides an extensive listing of economics textbooks available for the high school economics course, including a designation of those texts that were approved for use within the district.

Computer Software:

Agency for Instructional Technology and the Joint Council on Economic Education. Income/Outcome$. Bloomington, IN: AIT, 1986. Apple II or IBM. High School. An eight-part interactive microcomputer simulation package with teachers' guide, designed to reinforce the presentation of basic economic concepts in high school economics courses, as well as in other social science courses.

Tax Whys: Understanding Taxes. (For information, see the listing under "Audiovisual Materials" in this bibliography.)

Junior Achievement. Applied Economics Software: Management and Economic Stimulation Exercise (MESE). Colorado Springs: Junior Achievement, 1987. Apple II or IBM. High School. Interactive microcomputer simulation of business decisions regarding price, production, marketing, investment, and research & development. Available only to schools adopting the complete Applied Economics course package. Includes textbook, student workbook, software documentation, and lesson plans.

Joint Council on Economic Education. Marketplace. New York, JCEE, 1983. Apple II. Grades 10-12. Covers supply & demand curves, including simultaneous shifts in the curves; with teacher's guide and extended activities.

Tests:

Joint Council on Economic Education. Test of Economic Literacy (TEL). New York: JCEE, 1986. Grades 11-12. Normed in a large cross-section of the nation's schools, this test includes an examiner's manual with a scoring key, rationale for the correct answers, and norming data.

Joint Council on Economic Education, and the Foundation for Teaching Economics. Test of Economic Knowledge. New York: JCEE and FTE, 1988. Grades 7-9. Nationally normed achievement test for junior high school students, with an examiner's manual that includes a rationale for each correct answer, suggestions for classroom use, norming data, and other aids for researchers.

Bibliographies / Materials Catalogs:

Joint Council on Economic Education. Economic Education Materials for Teachers & Students. New York: JCEE. Annual.

Organizations / Sources of Materials:

Agency for Instructional Technology (AIT)
Box A
Bloomington, IN 47402
(812) 339-2203

Bay Area Global Education Program (BAGEP)
World Affairs Council
312 Sutter Street, Suite 200
San Francisco, CA 94108
(415) 982-3263

California Council on Economic Education
California State University, Fullerton
800 North State College Boulevard
Fullerton, CA 92634
(714) 773-2248

California Council for the Social Studies
1255 Vista Grande
Millbrae, CA 94030
(415) 692-4830

California Network of
Economics Teachers (CALNET)
Carol Khadjenouri, Editor
2163 Grove Street, San Francisco, CA 94117
(415) 552-7900

California Department of Education
History-Social Science Unit
721 Capitol Mall, 3rd Floor
P.O. Box 944272
Sacramento, CA 94244-2720
(916) 322-3064

Economic Education Foundation
P.O. Box 76
La Mesa, CA 92044-0010
(619) 442-4151

Federal Reserve Bank of San Francisco
Public Information Department
San Francisco, CA 94120
(415) 974-2000

Foundation for Teaching Economics
260 Russell Boulevard, Suite B
Davis, CA 95616
(916) 757-4630

Industry-Education Council of California
1550 Bascom Avenue, Suite 340
Campbell, CA 95008
(408) 559-7900

Junior Achievement, Inc.
45 Clubhouse Drive
Colorado Springs, CO 80906
(719) 540-8000

Junior Achievement of Bakersfield, Inc.
P.O. Box 9634
Bakersfield, CA 93389
(805) 864-6488

Junior Achievement of the Bay Area
150 North Hill Drive, Suite 37
Brisbane, CA 94005
(415) 468-7420

Junior Achievement of Sacramento, Inc.
1111 Howe Avenue, Suite 595
Sacramento, CA 95825
(916) 648-1084

Junior Achievement of San Diego County, Inc.
8840 Complex Drive, Suite 135
San Diego, CA 92123
(619) 541-1700

Junior Achievement of San Joaquin, Inc.
445 West Weber Avenue, Suite 220
Stockton, CA 95203
(209) 943-6610

Junior Achievement of Santa Clara County, Inc.
2860 Zanker Road, Suite 203
San Jose, CA 95134
(408) 943-1930

Junior Achievement of Sonoma County, Inc.
P.O. Box N/2308 Coddingtown Center
Santa Rosa, CA 95404
(707) 546-2578

Junior Achievement of Southern California, Inc.
5303 Lankershim Boulevard
North Hollywood, CA 91601
(818) 985-5700

Joint Council on Economic Education
432 Park Avenue South
New York, NY 10016
(212) 685-5499

Minnesota Educational
Computing Consortium (MECC)
3490 Lexington Ave. North
St. Paul, MN 55113
(612) 481-3500

State of California, Franchise Tax Board
Community Services Section
P.O. Box 520
Rancho Cordova, CA 95741-0520
(916) 369-4462

Errata

When the California Department of Education became aware of the following errors in the *Economic Education Mandate: Handbook for Survival,* the text had already been printed. Therefore, rather than incurring the expense of reprinting and replacing the affected pages, it was decided to acknowledge the mistakes in this errata and to correct the text in any subsequent printing. And in addition to the following errors, it is also acknowledged that there are other typographical mistakes that will also be corrected in any later printing of the handbook. It is the Department's hope that these editorial problems will not detract from the document's value as a resource for those preparing the one-semester course in economics that is required for graduation from high school in California.

Page, column, line	*Existing text*	*Should read*
Chapter 1		
2, col. 2, line 37	themselves,	himself or herself,
3, col. 2, line 13	say	says
4, col. 1, line 4	shows	show
5, col. 1, lines 8, 9	amount	number that
5, col. 1, line 23	criterion	criteria
5, col. 1, line 24	is	are
5, col. 1, line 38	mean	means
6, col. 1, line 26	can not	cannot
8, col. 1, line 23	their . . . their	his or her . . . the
8, col. 2, line 37	people).	people.)
12, col. 1, line 16	determines	determine
Chapter 2, Module #1		
1, col. 1, line 16	perservere	persevere
2, col. 2, line 38	amount	number
2, col. 2, line 41	economic way of thinking reasons	economist reasons
3, line 8	objects, above	objects above,
5, line 5	they only	those giving the party
5, line 9	.$50	$.50
Chapter 2, Module #2		
4, col. 2, lines 8, 9	tradition element of	element of tradition in
Chapter 2, Module #3		
2, col. 2, line 30	concerns,	concerns
3, line 1	Handout #1	Handout #2
Chapter 2, Module #4		
6, line 6	market"	market."

Page, column, line	*Existing text*	*Should read*
Chapter 2, Module #7		
6, line 4	Patent Activity	Patent and Copyright Activity
6, line 23	concerned.	concerned
Chapter 2, Module #9		
2, col. 1, line 1	amount	number
2, col. 1, line 41	criteria	criterion
2, col. 2, line 14	criterion	criteria
2, col. 2, line 16	criterion	criteria
4, line 16	among each student	among the students
Chapter 2, Module #10		
3, col. 1, line 32	Your . . .	Your [Text is missing.]
8, line 16	who . . . who	which one . . . which one
Chapter 3		
5, col. 1, line 26	they	together they

Publications Available from the Department of Education

This publication is one of over 600 that are available from the California Department of Education. Some of the more recent publications or those most widely used are the following:

ISBN	Title (Date of publication)	Price
0-8011-0883-7	The Ages of Infancy: Caring for Young, Mobile, and Older Infants (videocassette and guide) (1990)*	$65.00
0-8011-0973-6	The American Indian: Yesterday, Today, and Tomorrow (1991)	5.00
0-8011-0890-x	Bilingual Education Handbook: A Handbook for Designing Instruction for LEP Students (1990)	4.25
0-8011-0972-8	California Assessment Program: A Sampler of Mathematics Assessment (1991)	4.00
0-8011-0687-7	The California CBO: The 1987-88 Profile of Chief Business Officials in California Schools, K–12 (1989)	4.50
0-8011-0862-4	California Education Summit: Background and Final Report (a set) (1990)	5.00
0-8011-0889-6	California Private School Directory (1990)	14.00
0-8011-0924-8	California Public School Directory (1991)	14.00
0-8011-0748-2	California School Accounting Manual (1988)	8.00
	California's Daily Food Guide (brochure) (1990)†	6.00/25
0-8011-0874-8	The Changing History–Social Science Curriculum: A Booklet for Parents (1990)‡	5.00/10
0-8011-0867-5	The Changing Language Arts Curriculum: A Booklet for Parents (1990)‡	5.00/10
0-8011-0928-0	The Changing Language Arts Curriculum: A Booklet for Parents (Spanish Edition) (1991)‡	5.00/10
0-8011-0777-6	The Changing Mathematics Curriculum: A Booklet for Parents (1989)‡	5.00/10
0-8011-0891-8	The Changing Mathematics Curriculum: A Booklet for Parents (Spanish Edition) (1991)‡	5.00/10
0-8011-0978-7	Course Models for the History–Social Science Framework, Grade Five—United States History and Geography: Making a New Nation (1991)	7.00
0-8011-0797-0	Desktop Publishing Guidelines (1989)	4.00
0-8011-0833-0	Directory of Microcomputer Software for School Business Administration (1990)	7.50
0-8011-0976-0	Economic Education Mandate: Handbook for Survival (1991)	7.00
0-8011-0856-x	English as a Second Language Handbook for Adult Education Instructors (1990)	4.50
0-8011-0041-0	English–Language Arts Framework for California Public Schools (1987)	3.75
0-8011-0927-2	English–Language Arts Model Curriculum Standards: Grades Nine Through Twelve (1991)	4.50
0-8011-0894-2	Enhancing Opportunities for Students Underrepresented in Higher Education	3.50
0-8011-0751-2	First Moves: Welcoming a Child to a New Caregiving Setting (videocassette and guide) (1988)*	65.00
0-8011-0839-x	Flexible, Fearful, or Feisty: The Different Temperaments of Infants and Toddlers (videocassette and guide) (1990)*	65.00
0-8011-0849-7	Food Sanitation and Safety Self-Assessment Instrument for Child Care Centers (1990)	3.75
0-8011-0850-0	Food Sanitation and Safety Self-Assessment Instrument for Family Day Care Homes (1990)	3.75
0-8011-0851-9	Food Sanitation and Safety Self-Assessment Instrument for School Nutrition Programs (1990)	3.75
0-8011-0804-7	Foreign Language Framework for California Public Schools (1989)	5.50
0-8011-0809-8	Getting In Tune: Creating Nurturing Relationships with Infants and Toddlers (videocassette and guide) (1990)*	65.00
0-8011-0875-6	Handbook for Contracting with Nonpublic Schools for Exceptional Individuals (1990)	8.00
0-8011-0824-1	Handbook for Teaching Cantonese-Speaking Students (1989)§	4.50
0-8011-0909-4	Handbook on California Education for Language Minority Parents—Portuguese/English Edition (1990)‖	3.25
0-8011-0734-2	Here They Come: Ready or Not—Report of the School Readiness Task Force (Full Report) (1988)	4.25
0-8011-0712-1	History–Social Science Framework for California Public Schools (1988)	6.00
0-8011-0782-2	Images: A Workbook for Enhancing Self-esteem and Promoting Career Preparation, Especially for Black Girls (1988)	6.00
0-8011-0750-4	Infant/Toddler Caregiving: An Annotated Guide to Media Training Materials (1989)	8.75
0-8011-0878-0	Infant/Toddler Caregiving: A Guide to Creating Partnerships with Parents (1990)	8.25
0-8011-0877-2	Infant/Toddler Caregiving: A Guide to Routines (1990)	8.25
0-8011-0879-9	Infant/Toddler Caregiving: A Guide to Setting Up Environments (1990)	8.25
0-8011-0876-4	Infant/Toddler Caregiving: A Guide to Social–Emotional Growth and Socialization (1990)	8.25
0-8011-0828-4	Instructor's Behind-the-Wheel Guide for California's Bus Driver's Training Course (1989)	20.00
0-8011-0869-1	It's Not Just Routine: Feeding, Diapering, and Napping Infants and Toddlers (videocassette and guide) (1990)*	65.00
0-8011-0892-6	Literature for History–Social Science, Kindergarten Through Grade Eight (1991)	5.25
0-8011-0358-4	Mathematics Framework for California Public Schools (1985)	3.75
0-8011-0929-9	Model Curriculum Standards, Grades Nine Through Twelve (1985)	5.50

---

*Videocassette also available in Chinese (Cantonese) and Spanish at the same price.

†The price for 100 brochures is $16.50; the price for 1,000 brochures is $145.00.

‡The price for 100 booklets is $30.00; the price for 1,000 booklets is $230.00. A set of one of each of the parent booklets in English is $3.00.

§Also available at the same price for students who speak Japanese, Pilipino, and Portuguese.

‖The following editions are also available at the same price: Armenian/English, Cambodian/English, Chinese/English, Hmong/English, Japanese/English, Korean/English, Laotian/English, Pilipino/English, Samoan/English, Spanish/English, and Vietnamese/English.

ISBN	Title (Date of publication)	Price
0-8011-0968-x	Moral and Civic Education and Teaching About Religion (1991 Revised Edition)	$3.25
0-8011-0969-8	Not Schools Alone: Guidelines for Schools and Communities to Prevent the Use of Tobacco, Alcohol, and *Other Drugs Among Children and Youth (1991)*	3.25
0-8011-0974-4	Parent Involvement Programs in California Public Schools (1991)	6.00
0-8011-0306-1	Physical Education for Individuals with Exceptional Needs (1986)	5.25
0-8011-0845-4	Physical Education Model Curriculum Standards, Grades Nine Through Twelve (1991)	4.50
0-8011-0886-1	Program Guidelines for Individuals Who Are Deaf-Blind (1990)	6.00
0-8011-0817-9	Program Guidelines for Language, Speech, and Hearing Specialists Providing Designated Instruction and Services (1989)	6.00
0-8011-0899-3	Quality Criteria for Elementary Schools: Planning, Implementing, Self-Study, and Program Quality Review (1990)	4.50
0-8011-0906-x	Quality Criteria for High Schools (1990)	4.50
0-8011-0905-1	Quality Criteria for Middle Grades (1990)	4.50
0-8011-0815-2	A Question of Thinking: A First Look at Students' Performance on Open-ended Questions in Mathematics (1989)	6.00
0-8011-0858-6	Readings for Teachers of United States History and Government (1990)	3.25
0-8011-0831-4	Recommended Literature, Grades Nine Through Twelve (1990)	4.50
0-8011-0863-2	Recommended Readings in Literature, Kindergarten Through Grade Eight, Addendum (1990)	3.00
0-8011-0745-8	Recommended Readings in Literature, Kindergarten Through Grade Eight, Annotated Edition (1988)*	4.50
0-8011-0895-0	Recommended Readings in Spanish Literature: Kindergarten Through Grade Eight (1991)	3.25
0-8011-0753-9	Respectfully Yours: Magda Gerber's Approach to Professional Infant/Toddler Care (videocassette and guide) (1988)†	65.00
0-8011-0972-8	A Sampler of Mathematics Assessment (1991)	4.00
0-8011-0868-3	School Crime in California for the 1988-89 School Year (1990)	3.50
0-8011-0911-6	Schools for the Twenty-first Century (1990)	3.75
0-8011-0870-5	Science Framework for California Public Schools (1990)	6.50
0-8011-0665-6	Science Model Curriculum Guide, K–8 (1988)	3.75
0-8011-0925-4	Seeing Fractions: A Unit for the Upper Elementary Grades (1991)	7.00
0-8011-0970-1	Self-Assessment Guide for School District Policy Teams: Facilities Planning and Construction (1991)	3.50
0-8011-0860-8	Self-Assessment Guide for School District Policy Teams: Maintenance and Operations (1990)	3.50
0-8011-0857-8	Self-Assessment Guide for School District Policy Teams: Pupil Transportation Services (1990)	3.50
0-8011-0813-6	Self-Assessment Guide for School District Policy Teams: School Nutrition Program (1989)	3.50
0-8011-0752-0	Space to Grow: Creating a Child Care Environment for Infants and Toddlers (videocassette and guide) (1988)†	65.00
0-8011-0855-1	Strengthening the Arts in California Schools: A Design for the Future (1990)	4.50
0-8011-0920-5	Suggested Copyright Policy and Guidelines for California's School Districts (1991)‡	3.00
0-8011-0827-6	Technical Assistance Manual for the California Model School Accountability Report Card (1989)	3.75
0-8011-0846-2	Toward a State of Esteem: The Final Report of the California Task Force to Promote Self-esteem and Personal and Social Responsibility (1990)	4.25
0-8011-0854-3	Toward a State of Esteem, Appendixes to (1990)	4.25
0-8011-0758-x	Visions for Infant/Toddler Care: Guidelines for Professional Caregiving (1989)	5.50
0-8011-0805-5	Visual and Performing Arts Framework for California Public Schools (1989)	6.00
0-8011-0814-4	Writing Achievement of California Eighth Graders: A First Look (1989)	5.00
0-8011-0832-2	Writing Achievement of California Eighth Graders: Year Two (1989)	4.00
0-8011-0887-x	Writing Assessment Handbook, Grade 8 (1990)	8.50

---

*Includes complimentary copy of *Addendum* (ISBN 0-8011-0863-2).

†Videocassette also available in Chinese (Cantonese) and Spanish at the same price.

‡Also available in quantities of 10 for $12.50; 50 for $55.00; and 100 for $100.00.

Orders should be directed to:

California Department of Education
P.O. Box 271
Sacramento, CA 95812-0271

Please include the International Standard Book Number (ISBN) for each title ordered.

Remittance or purchase order must accompany order. Purchase orders without checks are accepted only from governmental agencies. Sales tax should be added to all orders from California purchasers. All prices include shipping charges to anywhere in the United States.

A complete list of publications available from the Department, including apprenticeship instructional materials, may be obtained by writing to the address listed above or by calling (916) 445-1260.

91-22 CR008923 9-91 3,920